Ancient India as described by Ptolemy

John W. McCrindle

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Ancient India as Described by Ptolemy is a classic work on the ancient geography of India. The text of the present edition is a facsimile reprint of the original edition published in Bombay in 1855 together with an Introduction and Notes, embodying the latest researches supplementing the commentary of Dr. McCrindle.

Dr. McCrindle has time and again pointed out that Ptolemy relied on Indian sources even in his description of other parts of Asia, and an attempt has been made in this work to show that the peoples of Central Asia were known to Sanskrit writers.

Rs 495

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John W. McCrindle

Edited with an introduction, notes and an additional map by

Surendranath Majumdar Sastri

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THIS VOLUME OF PTOLEMY'S GEŌGRAPHIKĒ HUPHĒGĒSIS

IS

BY KIND PERMISSION

DEDICATED

TO

G. E. FAWCUS, Esq., C.I.E., O.B.E., M.A., I.E.S.,
DIRECTOR OF PUBLIC INSTRUCTION, BEHAR & ORISSA

FOR

HIS CLASSICAL SCHOLARSHIP AND THE KEEN INTEREST HE TAKES IN GEOGRAPHY AND IN EVERYTHING THAT MAKES FOR THE ADVANCEMENT OF LEARNING

BY

THE EDITOR.

PREFACE TO THE NEW EDITION.

The gratifying reception, which their editions of Cunningham's *Ancient Geography of India* and McCrindle's *Ancient India as described by Megasthenês and Arrian*, have met with at the hands of scholars, has induced the publishers to bring out this, the third book of the series, McCrindle's Ptolemy. Though regarded as a classic on the Ancient Geography of India, the work has been long out of print and could not be procured in the market except at fancy prices. The text of the present edition is a *facsimile reprint* of the original edition published in Bombay in 1885 together with an Introduction and Notes, embodying the latest researches supplementing the commentary of Dr. McCrindle.

Dr. McCrindle has time and again pointed out that Ptolemy relied on Indian sources even in his description of other parts of Asia and in this work we have attempted to show that the peoples of Central Asia were known to Sanskrit writers. As Gerini has dealt with Ptolemy's account of Further India and the Indian Archipelago in his masterly "*Researches on Ptolemy's Geography*," no attempt has been made here to comment on this portion of Ptolemy.

Mr. G. E. Fawcus, C.I.E., O.B.E., Director of Public Instruction, Behar and Orissa, has laid us under a deep debt of gratitude by permitting us to associate his name with this work.

We must also express our special obligations to

Messrs. George Routledge & Sons, Limited, for permission to the present publishers to issue new editions of McCrindle's works on Ancient India.

We may be permitted to hope that the present volume will meet with the same welcome from students and scholars as was accorded to the first two books of this series.

S. N. M.

CALCUTTA :
The 1st June, 1927.

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INTRODUCTION.

§1. PTOLEMY AND HIS WORKS.

Klaudios Ptolemaios (or, to spell it according to the Latin system, Claudius Ptolemæus [1]) the celebrated astronomer, mathematician and geographer, was a native of Egypt. But neither the time nor the place of his birth, nor any of the events of his life, is known. He appears to have resided in Alexandria, where he made astronomical observations during the first half of the second century A.D. He has been described as of the royal race of the Ptolemies and has even been called 'King of Alexandria.' But there is no ground for these statements. There are numerous instances to show that the name Ptolemy was common in Egypt.

He was the first systematic writer on Greek astronomy whose works are now extant; but his astronomical labours are chiefly based on those of Hipparchus, who lived about 300 years before him, and whose calculations he adjusted to his own time. Ptolemy's great astronomical work is entitled *Megalē syntaxis tēs Astronomais*, and is commonly known by its Arabic title *Almagest* (which means 'the [Al] great work').

It contains an exposition of the system of the world, of the order and revolutions of the heavenly bodies, a treatise on rectilineal and spherical astro-

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[1] The nominative singular suffix **-os** (for Latin **-us**) and **k** (for Latin **c**) are the chief features of Greek spelling.

nomy, and a complete description of the astronomical instruments used by the Greeks. His system was universally accepted, until it was superseded by that of Copernicus.

His **Geography** (*Geōgraphikē Huphēgēsis* or *Geōgraphikē syntaxis*) is a work of equal historical importance. As an authority it maintained its ground till the commencement of maritime discovery in the fifteenth century. It contains little descriptive information, but gives a complete list of the names of places with their longitudes and latitudes as calculated in his time.

Ptolemy is indebted to Marinus of Tyre for almost the whole mass of his materials and he has fully acknowledged his obligations. As it is necessary to have some idea of the geographical contributions of the predecessors of Ptolemy in order to form a real estimate of his work, we proceed to give the following short account [1] of early classical geographers and specially of those who have written accounts of India.

§2. EARLY CLASSICAL GEOGRAPHERS.

The *earliest Greek notion of the earth* was that it was a flat and round disc encircled by the mighty river—*Ocean*. Homer and his contemporaries knew very little beyond Greece, the Archipelago, Asia Minor, Egypt, Sicily and a part of Italy. But the

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[1] The Evolution of Geography (London, 1899) by J. Keane, History of Ancient Geography by Sir E. Bunbury and the Dawn of Modern Geography (London, 1897) by C. R. Beazly are our chief sources. We are indebted to Bunbury and Beazly also for the writings in the *Encyclopædia Britannica* for §1, §3, §4, and §5 of this Introduction.

colonizing spirit of the Greeks expanded their knowledge. The first introduction of maps, at any rate, in Greece, (for the Egyptians and Babylonians are said to have drawn maps long before) and the discovery of an instrument to fix the latitude by Anaximander, a disciple of Thales, helped this expansion.[1]

Hecatœus (500 B.C.), the first Greek geographer, knew two continents only—Europe and Asia (a part of which was Africa). His "Survey of the World" is lost.

Herodotus (484-431 B.C.), the Father of History, was a traveller. He rejected the flat theory of the earth, but gave none of his own. He knew something of the countries from Scythia to Abyssinia and from India to the Pillars of Hercules. He regarded Africa as a separate continent. But "his knowledge of India was meagre and most vague. He knew that it was one of the remotest provinces of the Persian Empire towards the East; but of its extent and exact position he had no proper conception."[2]

The *Indica* of **Ktesias** (398 B.C.), the royal physician of Persia, is full of old wives' tales not to be trusted.

Alexander the Great's march through the Punjab and Sindh brought, for the first time, the direct Greek knowledge of India to the banks of the Sutlej. The great invader *caused the whole of India to be described* by men well acquainted with it.[3] Some of the eminent men of science and letters who had accompanied him wrote invaluable memoirs which

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[1] Keane's Evolution of Geography, pp. 5-6.
[2] McCrindle's Ancient India, p. 1.
[3] McCrindle's Alexander's Invasion, p. 6, f.n.

are now totally lost, but they furnished materials to subsequent writers—(1) **Diodorus** (100 B.C.–A.D. 100) who mixed history with fiction, (2) **Plutarch,** (3) **Strabo** (60 B.C.–A.D. 19), (4) **Curtius** (A.D. 100) who was 'deficient in the knowledge of Geography, Chronology and Astronomy,'[1] (5) **Arrian** (A.D. 200)—the best of Alexander's historians, and (6) **Justinus** (not later than A.D. 500). As none of them had even a very slight personal knowledge of India, their works, though based on accounts written by persons who actually visited India and invaluable for history, are not of much value for geography. A little vagueness due to want of personal knowledge and a few mutual contradictions diminish, not a little, their usefulness as a source of the geography of the North-Western and Western districts of India. Hence it is that "few of the places mentioned in them have been identified with any real approach to certainty."[2]

The long stay of **Megasthenês** (305 B.C.) in the very heart of India might probably have given his work great authority in topographical matters. But, unluckily for us, it exists only in fragments preserved as quotations. In the extant fragments we can only find out his idea of the shape of India, the names of some mountains and an important but doubtful catalogue of Indian races and tribes.

About 240 B.C. **Eratosthenes,** who was placed in charge of the great library established by the Ptolemies at Alexandria, brought Mathematics to his aid and *laid the first foundation of a really scientific*

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[1] McCrindle's Alexander's Invasion, p. 11.

[2] Dr. Fleet in I.A., 1901, p. 24.

geography. Accepting the theory which is said to have originated from Thales (600 B.C.) but the credit of which ought to go to Pythagoras, he took the *earth to be spherical* and lying in the centre of the universe. Though he had various errors, Sir E. Bunbury has justly pointed out that his geography is not *only much nearer to the truth than* that adopted by Ptolemy three centuries later, but it is actually a better approximation than was arrived at by modern geographers till about two centuries ago.[1] He described India on the authority of Alexander's historians, Megasthenês, and the Register of Stathmi or Marches.

About two centuries later flourished **Strabo** (60 B.C.–A.D. 19) whose object in writing a new geography was 'to correct the earlier works in light of the increase of knowledge' due to the foundation of the mighty Roman Empire. He did not carry us much further than Eratosthenes. Indeed in some respects he is even inferior to his predecessor. He distorted the shape of various countries. But he conceived rightly, noticed the difficulty of correctly representing a curved surface on a plane and perceived that a *projection* must be, to some extent, erroneous. As for his account of India, he himself has admitted that it cannot be absolutely correct. In excuse thereof he has pointed out the difficulty of getting correct information about India owing to its great distance and to the fact that only a part of it had been visited by a few ignorant men who were not qualified to write an account of it.[2]

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[1] Bunbury's Hist. of Ancient Geography, Vol. I, p, 635.

[2] McCrindle's Ancient India, p. 9, p. 17.

Pliny, the naturalist, (A.D. 23–79) deals with the geography of India in the sixth book of his *Natural History*. His notices of Asia are fuller and indicate an increasing trade between Europe and the East. And the discovery, made at this time by Hippalus, of the periodic nature of the monsoons (of the Indian Ocean) enabling the European navigators to take a direct route to India and not a coasting course, became a valuable aid to the commercial relations with India. The hearsay tales of these rough sailors were given credence by Pliny whose "love of the marvellous disposed him to accept far too readily even the most absurd fiction."[1]

The increase of trade with India created the demand of a guide-book which was produced in the form of the "**Periplus of the Erythræan sea**" by an anonymous writer (first century A.D.) who evidently sailed in person round the coast of India. It contains the best account of the commerce carried on from the Red Sea and the coast of Africa to the East Indies during the time that Egypt was a Roman province. It mentions river-mouths, ports, etc., with distances from one another, exports, imports and such other details as a merchant would most value.

The next writer of note was **Marinus** (or, to spell it according to the Greek system, Marinos) of Tyre (circa A.D. 120) to whom our author was indebted for almost the whole mass of his materials—a debt which has been fully acknowledged. His work is now lost.

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[1] McCrindle's Ancient India, p. 102.

§ 3. PTOLEMY, HIS SOURCES, HIS METHOD AND HIS ERRORS.

Now we turn to our author, **Ptolemy**, the greatest figure of this period. His exceptional position of authority down to the fifteenth century A.D. was largely due to the scientific form of his work which rendered it convenient and easy of reference. The astronomer Hipparchus had indeed pointed out, three centuries before Ptolemy, that the only way to construct a trustworthy map of the inhabited world would be by observations of the latitude and longitude of all the principal points of its surface. But the materials for such a map were almost wholly wanting—trustworthy observations of latitude were then very few, while the means of determining longitude hardly existed. Marinus of Tyre, attempted to follow the suggestion of Hipparchus. Ptolemy considered his work so satisfactory that he made it the basis of his own work in regard to all the Mediterranean countries. In the more remote regions of the world, Ptolemy availed himself of Marinus' information, but with reserve, and he explained the reasons that induced him sometimes to depart from his predecessor's conclusions. He adopted from Hipparchus the divisions of the equatorial circle into 360 parts (now called *degrees*) and supposed other circles to be drawn through this, from the equator to the pole, to which he gave the name of *meridians*. He thus conceived the whole surface of the earth to be covered with a network of *parallels of latitude and meridians of longitude*, terms which he has been the first extant writer to employ in this technical sense. Within the network thus constructed it was his task

to place the outline of the world, so far as known to him. These scientific features are the causes of his wide celebrity. But his system has many defects.

(1) He adopted the computation of *Poseidonius* (circa 135-50 B.C.) and *Marinus* that 180,000 stadia cover the circumference of the earth and thus *made every degree of latitude and longitude, measured at the equator, equal to* 500 *stadia* (50 geographical miles) *instead of its true equivalent of* 600 *stadia*.

(2) He calculated his longitudes from the prime meridian of Ferro in the Fortunate Islands (the Canaries and the Madeira islands) which were supposed to be lying farther west than any part of Europe or Africa. But neither *Ptolemy*, nor *Marinus*, his authority, had any exact knowledge of the islands in question. The prime meridian thus assumed was purely imaginary, being drawn through the supposed position of an island which they placed $2\frac{1}{2}°$ (instead of 9°20′) west of the Sacred Promontory (*i.e.* Cape St. Vincent, regarded by them as the westernmost point of Europe). Hence **all Ptolemy's longitudes, reckoned eastwards, were about 7° less** than they would have been if really measured from the meridian of Ferro. This error was the more unfortunate as the longitude was really calculated not from this imaginary line, but from Alexandria, westwards as well as eastwards, and afterwards reversed, so as to suit the supposed method of computation.

The *equator was* in like manner *placed* by Ptolemy *at a considerable distance from its true geographical position*. The place of the equinoctial line was well known to him as a matter of theory, but as no observations could have been made in those regions

he could only calculate its place from that of the tropic, which he supposed to pass through Syene. And reckoning the degree as 500 stadia, he inevitably made the distance between the tropic and the equator too small by one-sixth. Thus **his equator was 230 geographical miles higher than its actual position.**

(3) As only a few astronomical observations had been made in his time, he had to rely (and specially so in the case of India of which he had not even the slightest personal observation) upon *second-hand information*—reports of travellers, navigators, works of previous writers and certain Indian sources.

(4) In general shape his countries are narrowed at the north and enormously extended as they approach the south. Hence the eastern parts of Asia are carried a long way beyond their true distance from Europe and Africa.

On the southern shores of Asia his geography is specially faulty, though he shows a greatly increased general knowledge of these regions. Ptolemy not only gives to the Indian coasts, from the mouths of the Indus to those of the Ganges, an undue extension in longitude, but practically denies anything of an Indian Peninsula, placing Cape Komaria (Cape Comorin) only 4° south of Barygaza (Bharoach), the real distance being over 800 geographical miles, or according to Ptolemy's system of graduation, 16° of latitude. This error, distorting the whole appearance of South Asia, is associated with another as great in regard to Taprobane (Ceylon) which has been made about fourteen times as large as the reality and has been brought down, in its southern extremity, more than 2° south of the equator.

Similar distortions in regions beyond the Ganges, concerning which Ptolemy is the earliest and only classical writer, are to be met with. Between the date of the *Periplus* and that of *Marinus* it seems probable that the Greek mariners had not only crossed the Gangetic Gulf and visited the land on the opposite side, which they called the "Golden Chersonese," but pushed considerably farther east, to Cattigara. But these commercial voyages either brought back inaccurate notions, or Ptolemy's preconceptions destroyed the value of the new information, for nowhere did he distort the truth more wildly. After passing the Great Gulf, beyond the "Golden Chersonese," he makes the coast trend southward and thus places Cattigara (a South China port) $8\frac{1}{2}$°S. of the equator. In this he was perhaps influenced by **his notion of a junction of Asia and Africa in a 'terra incognita' south of the Indian Ocean which was thus a vast lake.**

(5) Thus **he has utterly distorted the shape of India.** His results would place Paithan in the Bay of Bengal, make the Ganges flow into the sea somewhere near Canton, make the *Mahânadî* river run over Siam and Cambodia, carry Pâtaliputra to the east of a line from Tonquin to Pekin and so on.

Thus we see that unless we have a thorough adjustment of Ptolemy's results for India, it is with but little confidence that we can use it towards reconstructing the geography and political divisions of Ancient India.

§ 4. PTOLEMY'S MAPS.

There can be no doubt that the work of Ptolemy was from the time of its first publication accompanied

with maps, which are regularly referred to in the eighth book. But how far those which are now extant represent the original series is a disputed point. In two of the most ancient MSS. (and of *Ptolemy's Geography*, no MS. older than the 12th century has been discovered), it is expressly stated that the *maps* which accompany them *are the work of one Agathodaemon of Alexandria*, who "drew them according to the eight books of Claudius Ptolemy" This expression might equally apply to the work of a contemporary draughtsman under the eyes of Ptolemy himself or to that of a skilful geographer at a later period who compiled these maps from the data supplied by Ptolemy after the loss of the original maps.

§ 5. BIBLIOGRAPHY.

Ptolemy's *Geographia* was printed for the first time in a Latin translation, accompanied with maps, in 1462 (?). The first edition of the Greek text was published (in 1533) at Basel, edited by Erasmus. The first attempt to edit it critically was made by F. G. Wilberg, and C. H. F. Grashof (1838–45) who edited the first six books only. The editions of C. F. A. Nobbé (Leipzig, 1843) and of C. Müller (1883–1906) are now the standard editions.

Dr. J. W. McCrindle's translation is based on the edition of Nobbé. It was first printed in the Indian Antiquary (1884) and then reprinted in book-form in 1885.

§. 6. RESEARCHES ON PTOLEMY'S GEOGRAPHY OF INDIA.[1]

M. D'Anville (1753–75) was the first to make a serious attempt to study the classical account of India. Mr. **Rennel** (1783–93) will ever be remembered for his Map of Hindoosthan.

Mannert (1797), **Wahl** (1805), Dr. **Vincent** (1807), the translator of the *Periplus*, and M. **Gossellin** deserve mention. But it was Colonel Francis **Wilford**, R.E., who made the first serious attempt to study the ancient Geography of India. His three essays on Egypt and the Nile from the Ancient Books of the Hindus, the Sacred Islands in the West and the Sanskrit Works on Geography (Asiatic Researches, vols. III, IX, XIV), the Comparative Geography of India (J.A.S.B., 1851), etc., indicate his attempt to study the *classical* account of India with materials from Indian sources. He "had zeal and wide reading and if he was endowed with the critical sense which he lacked entirely he might have done a great service."[2] Hence long extracts from his writings (quoted by Dr. McCrindle) are to be taken with caution.

H. H. Wilson has, in his *Ariana Antiqua*[3] (an account of the coins and antiquities discovered by Mr. Masson during his travels in Afghanistan) and in his *Notes on the Indica of Ctesias*,[4] written valuable

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[1] This section supplements the account of McCrindle in his Preface. Writers mentioned by him have not been referred to, unless we have anything to add.

[2] St. Martin's *Étal actuel des études sur l'Inde ancienne*, p. xii. This essay is our chief source for the first part of §6.

[3] London, 1841. [4] Oxford, 1836.

notes on the *classical* account (including that of Ptolemy) of the N.W. frontier of India. He also commented on the Geography of the *Meghadûta*, of the *Bhabishya Purâṇa*, of the *Vishṇu Purâṇa* and on the List of the peoples in the *Bhîshma-Parvan* of the *Mahâbhârata*—a list which is so valuable for eluci-dating so many obscure names in Ptolemy—as a supplement to his *Vishṇu Purâṇa*.

If one wishes to form an idea of the Ancient Geography of India in this period, one has to refer to **Carl Ritter's** writings (in *Erdkunde*, vol. V, 1835, pp. 434–529) based on Wilford, Sir W. Jones and Wilson.

Naming **W. Hamilton** (1820) we proceed to **Christian Lassen,** the encyclopœdic Indologist. His *Pentapotamia Indica* (1827), *De Taprobane Insula* (1842), *Beiträge Zur Kunde des indischen Alterthums aus dem Mahâbhârata* (Z. für die Kunde des Morgen-landes, vols. I–V, 1837–44), and *Indische Alterthums-kunde* in three volumes (Bonn, 1847–57)—the very learned and exhaustive work on the antiquities of India—give whatever information he could collect from *classical* and Sanskrit sources. Though "his system of identification is based on a wrong principle" (McCrindle's preface) and hence many of his identi-fications are wrong (Pargiter in J.A.S.B., 1895, p. 250), these works of erudition are 'precious mines of materials' utilised by later scholars.

It was **Henri Kiepert** (1853) who made the first serious attempt to draw a map of Ancient India. He based it mainly on that of Lassen. His Map of the Old World of Ptolemy is reproduced in the present work. Though some of the identifica-

tions in it have now been discarded yet it visualises, so to speak, the system and errors of Ptolemy.

We now turn to **M. Vivien de Saint-Martin**, the father of the geography of Ancient India. In his (1) *Étude sur la geographie et les populations primitive du Nord-ouest de l'Inde d'après les Hymnes Védiques* (Paris, 1860) (2) *Étude sur la géographie Grecque et Latine de l'Inde, et* **en particulier sur la carte de l'Inde de Ptolémie** and (3) *Mémoire Analytique sur la carte de l'Asie centrale et de l'Inde* (appended to vol. III of M. Julien's translation of Hwen Thsang. 1858) he has treated in a masterly manner the Vedic, the classical and the Chinese sources of the ancient geography of India and Central Asia. The second work is the first systematic commentary on the portions of Ptolemy's work translated by Dr. McCrindle. St.-Martin's "identifications have been made with so much care and success that few places have escaped his research and most of these have escaped only because the imperfection or want of fulness in the maps rendered actual identifications quite impossible." [1]

Sir Alexander Cunningham, the father of Indian archæology, has, in his Ancient Geography of India (1871) and his voluminous Reports of Archæological Survey of India (A.S.R. in 23 volumes), given a summary of the results of Lassen and V. de St.-Martin *revised* and *corrected* in the light of his own researches and discoveries, due chiefly to his vast travels in this country as a Royal Engineer and then as the Archæological Surveyor.

Though not a systematic writer on Ancient

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[1] Cunningham's A.S.R., II, Preface, p. 85.

Geography of India, **Dr. Caldwell** deserves mention for his valuable elucidation of the account of classical writers (specially Pliny, the author of the Periplus and Ptolemy) dealing with the land of the Dravidians in the introduction to his *Comparative Grammar of the Dravidian Languages*. To him belongs the credit of demonstrating that the South Indian place-names preserved in the *Periplus* and in the writings of Pliny and Ptolemy are to be explained not with the help of Sanskrit, but with that of Dravidian.

H. Yule's notes on *Marco Polo* and his map of Ancient India from classical sources (with a short memoir on it) in Dr. Smith's *Atlas of Ancient Geography* are valuable.

Dr. McCrindle's commentary on Ptolemy is based mainly, as he himself has stated, on the researches of Wilford Lassen, St.-Martin, Cunningham, Caldwell and Yule.

Gerini's *Researches on Ptolemy's Geography* (published by the Royal Asiatic Society, London) deals, in a masterly manner, with Ptolemy's account of Further India and the Indian Archipelago.

Prof. F. Pullé's Cartography of India in the *Studi Italiani di Filologia Indo-Iranica* (vols. IV and V) is the only up-to-date work on the subject.

Mr. **Schoff's** notes on the **Periplus** (Longmans Green) are very useful for the study of Ptolemy's description of the sea-coast of India.

Contributions to this subject from the pen of such scholars as Sir A. Stein, Raverty, Foucher, Fleet, Bhandarkar, V. Smith, Sir John Marshall, Sylvain Levi and others in the various Journals, memoirs, and reports, etc., are too numerous to be mentioned here.

ABBREVIATIONS USED BY THE EDITOR.

A(nn).R(ep).A.S.I.—Annual Reports of the Archæological Survey of India. (Director General's Reports.)

B. (Beg).S.I.H.—Aiyangar's Beginnings of South Indian History. (Madras University Lectures.)

Camb. H.I.—Rapson's Cambridge History of India, vol. I.

C.A.G.—Cunningham's Ancient Geography of India (Our Edition).

C.A.S.R. *or* A.S.R.—Cunningham's Reports on the Archæological Survey of India in 23 volumes.

E.H.I.—V. Smith's Early History of India.

E.I.—Epigraphia Indica.

I.A.—Indian Antiquary.

Imp. Gaz. Ind.—Imperial Gazetteer of India.

J.A.S.B.—Journal of the Asiatic Society of Bengal.

J.R.A.S.—Journal of the Royal Asiatic Society.

Mahâ Bh.—Mahâbhârata.

Matsya—Matsya Purâṇa (Bangabâsî Press, Calcutta).

Mar.—Mârkandeya Purâṇa (Pargiter's) published by the Asiatic Society, Bengal.

Schoff—Schoff's edition of the *Periplus*.

(Original Title page.)

ANCIENT INDIA

AS DESCRIBED BY

PTOLEMY;

BEING

A TRANSLATION OF THE CHAPTERS WHICH DESCRIBE INDIA AND CENTRAL AND EASTERN ASIA IN THE TREATISE ON GEOGRAPHY WRITTEN BY KLAUDIOS PTOLEMAIOS, THE CELEBRATED ASTRONOMER,

WITH

INTRODUCTION, COMMENTARY, MAP OF INDIA ACCORDING TO PTOLEMY, AND A VERY COPIOUS INDEX,

BY

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McCrindle's

PREFACE

TO THE ORIGINAL EDITION.

PTOLEMY'S "Treatise on Geography," like his famous work on astronomy to which it formed the sequel, was destined to govern the world's opinion on the subject of which it treated, from the time of its publication until the dawn of the modern era, a period of about 1,300 years. This treatise must have been composed in the interests of chartography rather than of geography, for the author's aim is not so much to describe the earth's surface as to lay down the principles on which maps should be constructed, and to determine the latitude and longitude of places with a view to their being mapped in their proper positions. The principles he here laid down have proved of permanent validity, and are still practically applied in the art of map-construction, but his determinations of the position of places, owing to the paucity and imperfection of the astronomical observations on which, in combination with the existing measurements of terrestrial distances his conclusions were based, are all, with very few exceptions, incorrect. The work

lost, of course, much of its old authority as soon as the discoveries of modern times had brought its grave and manifold errors to light. It did not, however, on this account cease to be of high interest and value as an antiquarian record, if we may judge from the multiplicity of the learned disquisitions which have from time to time been published in elucidation of many points of Ptolemaic Geography.

There is perhaps no part of the contents which has received more attention from scholars than the chapters relating to India, where the tables abound to a surprising extent with names which are found nowhere else in classical literature, and which were doubtless obtained directly from Indian sources, rather than from reports of travellers or traders who had visited the country. On glancing over these names one cannot fail to remark how very few of them have any but the most distant resemblance to the indigenous names which they must have been intended to represent. Philologists, however, have made persistent efforts to penetrate the disguise which conceals the original forms of the names so much distorted by Ptolemy, and have succeeded in establishing a great number of satisfactory identifications, as well as in hitting upon others which have a balance of probability in their favour—a similar service has been rendered by the archæological investigations which have

now for many years been systematically prosecuted under the auspices of the Indian Government.

The present work has for its main object to show concisely what has been accomplished up to this time in this department of enquiry. It has been compiled from multifarious sources which are not easily accessible, as for instance from foreign publications not yet translated into our own language, and from the Journals and Transactions of various societies at home and abroad which concern themselves with Oriental literature.

I venture therefore to hope that my compendium, which it has taken much time and laborious research to prepare, may meet with recognition and acceptance as a useful contribution to general literature, while proving also serviceable to scholars as a work of reference.

I proceed now to indicate the method which I have followed in the treatment of my subject, and to specify the authorities on which I have principally relied. I have then, in an introductory chapter, attempted to give a succinct account of the general nature of Ptolemy's geographical system, and this is followed by a translation of several chapters of his First Book which serve to exhibit his general mode of procedure in dealing with questions of Geography, and at the same time convey his views

of the configuration of the coasts of India, both on this side the Ganges and beyond. In translating the text I have taken it in detachments of convenient length, to each of which I have subjoined a commentary, the main object of which is—1st, to show, as far as has been ascertained, how each place named by Ptolemy in his Indian Tables has been identified; 2nd, to trace the origin or etymology of each name, so far as it is possible to do so; and 3rd, to notice very concisely the most prominent facts in the ancient history of the places of importance mentioned. I have, as a rule, quoted the sources from which my information has been derived, but may here state that I have generally adopted the views of M. Vivien de Saint-Martin and those of Colonel Yule, whose map of ancient India in Smith's well-known historical *Atlas of Ancient Geography* is allowed on all hands to be the best that has yet been produced. These authors have examined the greater part of the Ptolemaic Geography of India, and their conclusions are for the most part coincident. The works of Saint-Martin, which I have consulted, are these: *Étude sur la Géographie Grecque et Latine de l'Inde, et en particulier sur l'Inde de Ptolémée, dans ses rapports avec la Géographie Sanskrite*; *Mémoire Analytique sur la Carte de l'Asie Centrale et de l'Inde*; *et Étude sur la Géographie et les populations primitives du Nord-Ouest de l'Inde d'après*

les hymnes védiques. Colonel Yule has expressed his views chiefly in the notes upon the map referred to, but also occasionally in the notes to his edition of *Marco Polo* and in other works from his pen. Frequent reference will be found in my notes to that work of vast erudition, Prof. Lassen's *Indische Alterthumskunde*. Unfortunately the section which he has devoted to a full examination of Ptolemy's India is the least satisfactory portion of his work. His system of identification is based on a wrong principle, and many of the conclusions to which it has led are such as cannot be accepted. His work is notwithstanding, as Yule says, "a precious mine of material for the study of the ancient geography of India." For elucidations of the Ptolemaic geography of particular portions of India I have consulted with great advantage such works as the following:— Wilson's *Ariana Antiqua*, General Cunningham's *Geography of Ancient India*, Vol. I. (all yet published), and his *Reports on the Archæological Survey of India*; Bishop Caldwell's Introduction to his *Dravidian Grammar*, valuable for identification of places in the south of the Peninsula; the *Bombay Gazetteer*, edited by Mr. J. M. Campbell, who has carefully investigated the antiquities of that Presidency; the volumes of *Asiatic Researches*; the *Journals of the Royal Asiatic Society* and of the kindred Societies in India; the *Journals of the Royal*

Geographical Society; the articles on India and places in India in Smith's *Dictionary of Classical Geography*, written almost all by Mr. Vaux; articles in the *Indian Antiquary*; Benfey's *Indien* in the *Encyclopädie* of Ersch and Grüber; the Abbé Halma's *Traité de Géographie de Claude Ptolémée*, Paris, 1828; the Chapters on Marinus and Ptolemy's System of Geography in Bunbury's *History of Ancient Geography*; Priaulx's *Indian Travels of Apollonius of Tyana*, &c.; Stephanos of Byzantium *On Cities*; Sir Emerson Tennent's *Ceylon*; Sir H. Rawlinson's articles on Central Asia which have appeared in various publications, and other works which need not here be specified.

There has recently been issued from the press of Firmin-Didot, Paris, the first volume of a new and most elaborate edition of Ptolemy's Geography, prepared by C. Müller, the learned editor of the *Geographi Graeci Minores*, but the work unfortunately has not advanced so far as to include the chapters which contain the geography of India.

I would here take the opportunity of expressing my obligations to Dr. Burgess, the late editor of the *Indian Antiquary*, for his careful revision of the proofs, and for sundry valuable suggestions.

Having thought it advisable to extend the scope of the work beyond the limits originally contemplated, I have included in it those

chapters of the geography in which China, Central Asia, and all the provinces adjacent to India are described. The reader is thus presented with the Ptolemaic Geography of the whole of Asia, with the exception only of those countries which from propinquity and frequency of intercourse were well known to the nations of the West.

In a short Appendix will be found some additional notes.

The present volume forms the fourth of the Series of Annotated Translations of the Works of the Classical Writers which relate to India. Another volume, containing Strabo's Indian Geography and the Accounts given by Arrian and Curtius of the Makedonian Invasion of India, will complete the series.

3, Abbotsford Park, Edinburgh,
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PTOLEMY'S GEOGRAPHY OF INDIA AND SOUTHERN ASIA.

Introduction.

Ptolemy and his System of Geography.

Klaudios Ptolemaios, or as he is commonly called, Ptolemy, was distinguished alike as a Mathematician, a Musician, an Astronomer and a Geographer, and was altogether one of the most accomplished men of science that antiquity produced. His works were considered as of paramount authority from the time of their publication until the discoveries of modern times had begun to show their imperfections and errors. It is surprising that with all his fame, which had even in his own lifetime become pre-eminent, that the particulars of his personal history should be shrouded in all but total darkness. Nothing in fact is known for certain regarding him further than that he flourished in Alexandria about the middle of the 2nd century of our æra, in the reign of Antoninus Pius, whom he appears to have survived.

His work on Geography formed a sequel to his great work on Astronomy, commonly called the *Almagest*. From its title *Γεωγραφικὴ Ὑφήγησις*, *an Outline of Geography*, we might be led to infer

that it was a general treatise on the subject, like the comprehensive work of Strabo, but in reality it treats almost exclusively of Mathematical, or what may be called Cosmical, Geography. Ptolemy's object in composing it was not like that of the ordinary Geographer to describe places, but to correct and reform the map of the world in accordance with the increased knowledge which had been acquired of distant countries and with the improved state of science. He therefore limits his argument to an exposition of the geometrical principles on which Geography should be based, and to a determination of the position of places on the surface of the earth by their latitudes and longitudes. What he considered to be the proper method of determining geographical positions he states very clearly in the following passage: "The proper course," he says, "in drawing up a map of the world is to lay down as the basis of it those points that were determined by the most correct (astronomical) observations, and to fit into it those derived from other sources, so that their positions may suit as well as possible with the principal points thus laid down in the first instance."[1]

Unfortunately, as Bunbury remarks, it was impossible for him to carry out in practice—even approximately—the scheme that he had so well laid down in theory. The astronomical observations to which he could refer were but few—and they were withal either so defective or so inaccurate that he could not use them with con-

[1] Book I. cap. 4. The translation is Bunbury's.

fidence. At the same time his information concerning many parts of the earth, whether owing to their remoteness or the conflicting accounts of travellers regarding them, was imperfect in the extreme. The extent, however, of his geographical knowledge was far greater than that possessed by any of his predecessors, and he had access to sources of information which enabled him to correct many of the errors into which they had fallen.

He was induced to undertake the composition of his *Geography* through his being dissatisfied more or less with all the existing systems. There was however one work—that of his immediate precursor, Marinos of Tyre—which approximated somewhat closely to his ideal, and which he therefore made the basis of his own treatise. Marinos, he tells us, had collected his materials with the most praiseworthy diligence, and had moreover sifted them both with care and judgment. He points out, however, that his system required correction both as to the method of delineating the sphere on a plane surface, and as to the computation of distances, which he generally exaggerated. He censures him likewise for having assigned to the known world too great a length from west to east, and too great a breadth from north to south.

Of Ptolemy's own system, the more prominent characteristics may now be noted: He assumed the earth to be a sphere, and adopting the estimate of Poseidônios fixed its circumference at 180,000 stadia, thus making the length of a degree at the equator to be only 500 stadia, instead of 600, which

is its real length.[2] To this fundamental miscalculation may be referred not a few of the most serious errors to be found in his work. With regard to the question of the length and the breadth of the inhabited part of the earth, a question of first importance in those days, he estimated its length as measured along the parallel of Rhodes[3] which divided the then known world into two nearly equal portions at 72,000 stadia, and its breadth at 40,000. The meridian in the west from which he calculated his longitudes was that which passed through the Islands of the Blest (*Μακάρων Νῆσοι*) probably the Canary Islands,[4] and his most

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[2] The Olympic *stadium*, which was in general use throughout Greece, contained 600 Greek feet, which were equal to 625 Roman feet, or 606¾ English feet. The Roman mile contained 8 stadia, or about half a stadium less than an English mile. A stadium of 600 Greek feet was very nearly the 600th part of a degree, and 10 stadia are therefore just about equal to a Nautical or Geographical mile. According to Eratosthenes, a degree at the Equator was equal to 700 stadia, but according to Poseidônios it was equal to only 500. The truth lay between, but Ptolemy unfortunately followed Poseidônios in his error.

[3] "The equinoctial line was of course perfectly fixed and definite in Ptolemy's mind, *as an astronomical line*; but he had no means of assigning its position on the Map of the World, except with reference to other parallels, such as the tropic at Syene, or the parallels of Alexandria and Rhodes, which had been determined by direct observation."—Bunbury, *Hist. of Anc. Geog.*, vol. II, p. 560, n. 2.

[4] The Island of Ferro—the westernmost of the Group of the Canaries, which was long taken as the prime meridian, and is still so taken in Germany—is really situated 18° 20′ west of Greenwich, while Cape St. Vincent (called anciently *the Sacred Cape*) is just about 9°, so that the real difference between the two amounted to 9° 20′ instead of only 2½°. Two corrections must therefore be applied to Ptolemy's longitudes—one-sixth must be deducted because of his under-estimate of the length

eastern meridian was that which passed through the Metropolis of the Sinai, which he calls Sinai or Thinai, and places in 180° 40′ E. Long. and 3° S. Lat. The distance of this meridian from that of Alexandria he estimated at 119½ degrees, and the distance of the first meridian from the same at 60½ degrees, making together 180 degrees, or exactly one-half of the circumference of the earth. His estimate of the breadth he obtained by fixing the southern limit of the inhabited parts in the parallel of 16¼ degrees of South Latitude, which passes through a point as far south of the Equator as Meroë is north of it. And by fixing the northern limit in the parallel of 63 degrees North Latitude, which passes through Thoulê (probably the Shetland Islands), a space of nearly 80 degrees was thus included between the two parallels, and this was equivalent in Ptolemy's mode of reckoning to 40,000 stadia.

Having made these determinations he had next to consider in what mode the surface of the earth with its meridians of longitude and parallels of latitude should be represented on a sphere and on a plane surface—of the two modes of delineation that on the sphere is the much easier to make, as it involves no method of projection, but a map drawn on a plane is far more convenient for use, as it presents simultaneously to the eye a far greater extent of surface. Marinos had drawn his map of the world on a plane, but his method

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of a degree along the Equator, and 6° 50′ must be added because Ferro was so much further west than he supposed. Subject to these corrections his longitudes would be fairly accurate, provided his calculations of distances were otherwise free from error.

of projection was altogether unsatisfactory. It is thus described by Ptolemy: Marinos, he says, on account of the importance of the countries around the Mediterranean, kept as his base the line fixed on of old by Eratosthenes, *viz.*, the parallel through Rhodes in the 36th degree of north latitude. He then calculated the length of a degree along this parallel, and found it to contain 400 stadia, the equatorial degree being taken at 500. Having divided this parallel into degrees he drew perpendiculars through the points of division for the meridians, and his parallels of latitude were straight lines parallel to that which passed through Rhodes. The imperfections of such a projection are obvious. It represented the parts of the earth north of the parallel of Rhodes much beyond, and those south of it much below, their proper length. Places again to the north of the line stood too far apart from each other, and those to the south of it too close together. The projection, moreover, is an erroneous representation, since the parallels of latitude ought to be circular arcs and not straight lines.

Ptolemy having pointed out these objections to the system of Marinos proceeds to explain the methods which he himself employed. We need say nothing more regarding them than that they were such as presented a near approximation to some of those which are still in use among modern Geographers.

Ptolemy's treatise is divided into 8 books. In the 1st or introductory book he treats first of Geography generally—he then explains and

criticizes the system of Marinos, and concludes by describing the methods of projection which may be employed in the construction of maps. The next 6 books and the first 4 chapters of the 7th book consist of tables which give distinctly in degrees and parts of a degree the latitudes and longitudes of all the places in his map. These places are arranged together in sections according to the country or tribe to which they belong, and each section has prefixed to it a brief description of the boundaries and divisions of the part about to be noticed. Descriptive notices are also occasionally interspersed among the lists, but the number of such is by no means considerable. The remainder of the 7th book and the whole of the 8th are occupied with a description of a series of maps which, it would appear, had been prepared to accompany the publication of the work, and which are still extant. The number of the maps is twenty-six, viz. 10 for Europe, 4 for Libya, and 12 for Asia. They are drawn to different scales, larger or smaller, according as the division represented was more or less known. He gives for each map the latitudes and longitudes of a certain number of the most important cities contained in it, but these positions were not given in the same manner as in the tables, for the latitudes are now denoted by the length of the longest day and the longitudes according to the difference of time from Alexandria. It might be supposed that the positions in question were such as had been determined by actual astronomical observations, as distinguished from those in the Tables, which were for the most part derived from itin-

eraries, or from records of voyages and travels. This supposition is however untenable, for we find that while the statements as to the length of the longest days at the selected places are always correct for the latitudes assigned them, they are often glaringly wrong for their real positions. Ptolemy, it is evident, first mapped out in the best way he could the places, and then calculated for the more important of these places the astronomical phenomena incident to them as so situated. I conclude by presenting the reader with a translation of some chapters of the Introductory Book,[5] where Ptolemy in reviewing the estimate made by Marinos of the length of the known world from west to east, has frequent occasion to mention India and the Provinces beyond the Ganges, which together constitute what is now called Indo-China.

Book I., Cap. 11.

§ 1. What has now been stated will suffice to show us what extent in *breadth* it would be fair to assign to the inhabited world. Its *length* is given by Marinos at 15 hours, this being the distance comprised between his two extreme meridians—but in our opinion he has unduly extended the distance towards the east. In fact, if the estimate be properly reduced in this direction the entire length must be fixed at less than 12 hours, the Islands of the Blest being taken as the limit towards

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[5] The edition used is that of C. F. A. Noble, Leipsic, 1843.

the west, and the remotest parts of Sêra and the Sinai[6] and Kattigara[7] as the limit towards

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[6] "China for nearly 1,000 years has been known to the nations of Inner Asia, and to those whose acquaintance with it was got by that channel, under the name of Khitai, Khata, or Cathay, *e.g.*, the Russians still call it Khitai. The pair of names, Khitai and Machin, or Cathay and China, is analogous to the other pair Seres and Sinai. Seres was the name of the great nation in the far east as known by land, Sinai as known by sea; and they were often supposed to be diverse, just as Cathay and China were afterwards." Yule's *Marco Polo*, 2nd ed., Introd., p. 11 and note.

[7] The locality of Kattigara has been fixed very variously. Richthofen identified it with Kian-chi in Tong-king, and Colonel Yule has adopted this view. "To myself," he says, "the arguments adduced by Richthofen in favour of the location of Kattigara in the Gulf of Tong-king, are absolutely convincing. This position seems to satisfy every condition. For 1st, Tong-king was for some centuries at that period (B.C. 111 to A.D. 263), only incorporated as part of the Chinese Empire. 2nd, the only part mentioned in the Chinese annals as at that period open to foreign traffic was Kian-chi, substantially identical with the modern capital of Tong-king, Kesho or Hanoi. Whilst there are no notices of foreign arrivals by any other approach, there are repeated notices of such arrivals by this province, including that famous embassy from Antun, King of Ta-t'sin, *i.e.*, M. Aurelius Antoninus (A.D. 161-180) in A.D. 166. The province in question was then known as Ji-nan (or Zhi-nan, French); whence possibly the name Sinai, which has travelled so far and spread over such libraries of literature. The Chinese Annalist who mentions the Roman Embassy adds: 'The people of that kingdom (Ta-t'sin or the Roman Empire) came in numbers for trading purposes to Fu-nan, Ji-nan, and Kian-chi.' Fu-nan we have seen, was Champa, or Zabai. In Ji-nan with its chief port Kian-chi, we may recognize with assurance Kattigara, Portus Sinarum. Richthofen's solution has the advantages of preserving the true meaning of Sinai as the Chinese, and of locating the Portus Sinarum in what was then politically a part of China, whilst the remote Metropolis Thinae remains unequivocally the capital of the Empire, whether Si-gnan-fu in Chen-si, or Lo-yang in Ho-nan be meant. I will only add that though we find Katighora in Edrisi's *Geography*, I apprehend this to be a mere adoption from the *Geogra-*

the east. § 2. Now the entire distance from the Islands of the Blest to the passage of

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phy of Ptolemy, founded on no recent authority. It must have kept its place also on the later mediæval maps; for Pigafetta, in that part of the circumnavigation where the crew of the *Victoria* began to look out for the Asiatic coast, says that Magellan 'changed the course . . . until in 13° of N. Lat. in order to approach the land of Cape Gaticara, which Cape (under correction of those who have made cosmography their study, for they have never seen it), is not placed where they think, but is towards the north in 12° or thereabouts.' [The Cape looked for was evidently the extreme S.E. point of Asia, actually represented by Cape Varela or Cape St. James on the coast of Cochin-China.] It is probable that, as Richthofen points out, Kattigara, or at any rate Kian-chi, was the Lukin or Al-Wâkin of the early Arab Geographers. But the terminus of the Arab voyagers of the 9th century was no longer in Tong-King, it was Khân-fû, apparently the Kan-pu of the Chinese, the haven of the great city which we know as Hang-chow, and which then lay on or near a delta-arm of the great Yang-tse." These arguments may be accepted as conclusively settling the vexed question as to the position of Kattigara. In a paper, however, recently read before the R. Asiatic Society, Mr. Holt, an eminent Chinese scholar, expressed a different view. He "showed that there was good evidence of a very early communication from some port on the Chinese coast to near Martaban, or along the valley of the Irâwaḍî to the north-west capital of China, then at Si-gnan-fu or Ho-nan-fu. He then showed that the name of China had been derived from the Indians, who first knew China, and was not due to the Tsin Dynasty, but more probably came from the name of the Compass, specimens of which were supplied to the early envoys, the Chinese being thus known in India as the 'Compass-people,' just as the Seres, another Chinese population derived their western name from 'Silk.' That the knowledge of this fact was lost to both Indians and Chinese is clear from the use by Hiuen-Tsiang and later writers of two symbols (see Morrison's *Dictionary*, syllabic part, No. 8,033) to designate the country, as these, while giving the sound 'Che-ha,' indicate that they are substitutes for original words of like sounds, the true sense of which cannot now be recovered. Having shown that M. Reinaud's view of an intercourse between China and Egypt in the first century A.D. has no real foundation, Mr. Holt

the Euphrates at Hierapolis, as measured along the parallel of Rhodes, is accurately determined by summing together the several intervening distances as estimated in stadia by Marinos, for not only were the distances well ascertained from being frequently traversed, but Marinos seems moreover in his computation of the greater distances, to have taken into account the necessary corrections for irregularities and deviations.[8] He understood, besides, that while the length of a single degree of the 360 degrees into which the equatorial circle is divided measures, as in the commonly accepted estimate, 500 stadia, the parallel circle which passes through Rhodes in 36 degrees of N. latitude, measures about 400 stadia. § 3. It measures, in fact, a little over that number if we go by the exact proportion of the parallels, but the excess is so trifling as in the case of the equatorial degree, that it may be neglected. But

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further stated that there was no evidence of an embassy from M. Aurelius having gone by sea to China in A.D. 166. In conclusion, he urged, that in his judgment, there was no proof whatever of any knowledge of a maritime way to China before the 4th century A.D., the voyage even of Fa-hian, at that period being open to serious criticism. He believes therefore with M. Gosselin that the Kattigara of Ptolemy was probably not far from the present Martaban, and that India for a considerable period up to the 7th century A.D. dominated over Cambodia."

[8] Deviations from the straight line by which the route would be represented in the map. The irregularities refer to the occasional shortening of the daily march by obstacles of various kinds, bad roads, hostile attacks, fatigue, &c.

his estimates of the distances beyond Hierapolis require correction. § 4. He computes the distance from the passage of the Euphrates already mentioned to the Stone Tower[9] at 876

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9 "One of the circumstances of the route that Ptolemy has reproduced from Marinos is that on leaving Baktra the traveller directed his course for a long enough time towards the North. Assuredly the caravans touched at Samarkand (the Marakanda of Greek authors) which was then, as now, one of the important centres of the region beyond the Oxus. For passing from Sogdiana to the east of the snowy range, which covers the sources of the Jaxartes and the Oxus, three main routes have existed at all times: that of the south, which ascends the high valleys of the Oxus through Badakshân; that in the centre, which goes directly to Kâshgar by the high valleys of the Syr-Darya or Jaxartes: and lastly that of the north, which goes down a part of the middle valley of the Jaxartes before turning to the east towards Chinese Tartary Of these three routes, the itinerary of the Greek merchants could only apply to the 2nd or the 3rd; and if, as has been for a long time supposed with much probability, the Stone Tower of the Itinerary is found in an important place belonging to the valley of the Jaxartes, of which the name Tâshkand has precisely the same meaning in the language of the Turkomâns, it would be the northern route that the caravan of Maës would have followed. The march of seven months in advancing constantly towards the east leads necessarily towards the north of China (Saint-Martin, *Étude*, pp. 428-9.) Sir H. Rawlinson however assigns it a more southern position, placing it at Tash-kurghan, an ancient city which was of old the capital of the Sarik-kul territory, a district lying between Yarkand and Badakshan, and known to the Chinese as Ko-panto. The walls of Tash-kurghan are built of unusually large blocks of stone. It was no doubt, Sir Henry remarks, owing to the massive materials of which it was built, that it received the name of Tash-kurghan or the 'Stone Fort,' and it seems to have every claim to represent the *λίθινος πύργος* of Ptolemy, where the caravans rendezvoused before entering China, in preference to Tashkand or Ush, which have been selected as the site of the Stone Tower by other geographers."—*Jour. R. Geog. Soc.* vol. XLII, p. 327.

schœni[10] or 26,280 stadia, and from the Stone Tower to Sêra, the metropolis of the Sêres, at a 7 months' journey or 36,200 stadia as reckoned along the same parallel. Now in neither case has he made the proper deductions for the excess caused by deviations; and for the second route he falls into the same absurdity as when he estimated the distance from the Garamantes to Agisymba.[11] § 5. Where he had to deduct above half of the stadia in the march of the 3 months and 14 days, since such a march could not possibly have been accomplished without halting.

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10 According to Herodotos (lib. II, c. vi), the *schoinos* was equal to two Persian *parasangs* or 60 stadia, but it was a very vague and uncertain measure, varying as Strabo informs us (lib. XVII, c. i, 24) from 30 to 120 stadia. In the case before us, it was taken as equivalent to the *parasang* of 30 stadia and afforded with correction some approximation to the truth.

11 "The Roman arms had been carried during the reign of Augustus (B. C. 19) as far as the land of the Garamantes, the modern Fezzan, and though the Roman Emperors never attempted to establish their dominion over the country, they appear to have permanently maintained friendly relations with its rulers, which enabled their officers to make use of the oasis of the Garamantes as their point of departure from which to penetrate further into the interior. Setting out from thence, a General named Septimius Plancus 'arrived at the land of the Ethiopians, after a march of 3 months towards the south.' Another Commander named Julius Maternus, apparently at a later date, setting out from Leptis Magna, proceeded from thence to Garama, where he united his forces with those of the king of the Garamantes, who was himself undertaking a hostile expedition against the Ethiopians, and their combined armies 'after marching for four months towards the south,' arrived at a country inhabited by Ethiopians, called Agisymba, in which rhinoceroses abounded."—Bunbury, *Hist. of Anc. Geog.*, vol. II, pp. 522-3.

The necessity for halting would be still more urgent when the march was one which occupied 7 months. § 6. But the former march was accomplished even by the king of the country himself, who would naturally use every precaution, and the weather besides was all throughout most propitious. But the route from the Stone Tower to Sêra is exposed to violent storms, for as he himself assumes, it lies under the parallels of the Hellespont and Byzantium,[12] so that the progress of travellers would be frequently interrupted. § 7. Now it was by means of commerce this became known, for Marinos tells us that one Maës, a Makedonian, called also Titianus, who was a merchant by hereditary profession, had written a book giving the measurement in question, which he had obtained not by visiting the Sêres in person, but from the agents whom he had sent to them. But Marinos seems to have distrusted accounts borrowed from traders. § 8. In giving, for instance, on the authority of Philêmon, the length of Ivernia (Ireland) at a 20 days' journey, he refuses to accept this estimate, which was got, he tells us, from merchants, whom he reprobates as a class of men too much engrossed with their own proper business to care about ascertaining the truth, and who also from mere vanity frequently exaggerated distances. So

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[12] Lat. 40° 1′—Lat. of Tâsh-kurghân.

too, in the case before us, it is manifest that nothing in the course of the 7 months' journey was thought worthy either of record or remembrance by the travellers except the prodigious time taken to perform it.

Cap. 12.

§ 1. Taking all this into consideration, together with the fact that the route does not lie along one and the same parallel (the Stone Tower being situated near the parallel of Byzantium, and Sêra lying farther south than the parallel through the Hellespont) it would appear but reasonable in this case also to diminish by not less than a half the distance altogether traversed in the 7 months' journey, computed at 36,200 stadia, and so let us reduce the number of stadia which these represent at the equator by one-half only, and we thus obtain (22,625) stadia or $45\frac{1}{4}$ degrees.[13] § 2. For it would be absurd, and show a want of proper judgment, if, when reason enjoins us to curtail the length of both routes, we should follow the injunction with respect to the African route, to the length of which there is the obvious objection, *viz.*, the species of animals in the neighbourhood of Agisymba,

[13] 36,200 stadia along the parallel of Rhodes are equivalent according to Ptolemy's system, to 45,250 stadia along the equator, and this sum reduced by a half gives the figures in the text.

which cannot bear to be transplanted from their own climate to another, while we refuse to follow the injunction with regard to the route from the Stone Tower, because there is not a similar objection to its length, seeing that the temperature all along this route is uniform, quite independently of its being longer or shorter. Just as if one who reasons according to the principles of philosophy, could not, unless the case were otherwise clear, arrive at a sound conclusion.[14]

§ 3. With regard again to the first of the two Asiatic routes, that, I mean which leads from the Euphrates to the Stone Tower, the estimate of 870 *schœni* must be reduced to 800 only, or 24,000 stadia, on account of deviations. § 4. We

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[14] Marinos was aware that Agisymba lay in a hot climate, from the fact that its neighbourhood was reported to be a favourite resort for rhinoceroses, and he was thus compelled to reduce his first estimate of its distance, which would have placed it in far too cold a latitude for these animals, which are found only in hot regions. But no such palpable necessity compelled him to reduce his estimate of the distance from the Stone Tower to the Metropolis of the Sêres, for here the route had an equable temperature, as it did not recede from the equator but lay almost uniformly along the same parallel of latitude. A little reflexion, however, might have shown Marinos that his enormous estimate of the distance to the Seric Metropolis required reduction as much as the distance to Agisymba, though such a cogent argument as that which was based on the habitat of the rhinoceros was not in this instance available. It is on the very face of it absurd to suppose that a caravan could have marched through a difficult and unknown country for 7 months consecutively at an average progress of 170 stadia (about 20 miles) daily.

may accept as correct his figures for the entire distance as the several stages had been frequently traversed and had therefore been measured with accuracy. But that there were numerous deviations is evident from what Marinos himself tells us. § 5. For the route from the passage of the Euphrates at Hierapolis through Mesopotamia to the Tigris, and the route thence through the Garamaioi of Assyria, and through Media to Ekbatana and the Kaspian Gates, and through Parthia to Hekatompylos Marinos considers to lie along the parallel which passes through Rhodes, for he traces (*in his map*) this parallel as passing through these regions. § 6. But the route from Hekatompylos to the capital city of Hyrkania must, of necessity, diverge to the north, because that city lies somewhere between the parallel of Smyrna and that of the Hellespont, since the parallel of Smyrna is traced as passing below Hyrkania and that of the Hellespont through the southern parts of the Hyrkanian Sea from the city bearing the same name, which lies a little farther north. § 7. But, again, the route herefrom to Antiokheia (Merv) of Margiana through Areia, at first bends towards the south, since Areia lies under the same parallel as the Kaspian Gates, and then afterwards turns towards the north, Antiokheia being situated under the parallel of

the Hellespont.[15] The route after this runs in an eastward direction to B a k t r a whence it turns towards the north in ascending the mountains of the K ô m ê d o i, and then in passing through these mountains it pursues a southern course as far as the ravine that opens into the plain country. § 8. For the northern parts of the mountain region and those furthest to the west where the ascent begins, are placed by him under the parallel of Byzantium, and those in the south and the east under the parallel of the Hellespont. For this reason, he says, that this route makes a detour of equal length in opposite directions, that in advancing to the east it bends towards the south, and thereafter probably runs up towards the north for 50 *schœni*, till it reaches the Stone Tower. § 9. For to quote his own

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15 The actual latitudes of the places here mentioned may be compared with those of Ptolemy :—

	Real Lat.	Ptolemy's Lat.
Byzantium	41°	43° 5′
Hellespont	40°	41° 15′
Smyrna	38° 28′	38° 35′
Issus	37°	36° 35′
Rhodes	36° 24′	36° 25′
Hierapolis	36° 28′	36° 15′
Ekbatana	34° 50′	37° 45′
Kaspian Gates	35° 30′	37°
Hekatompylos	35° 40′	37° 50′
Antiokheia (Merv)	37° 35′	40° 20′
Baktra (Balkh)	36° 40′	41°
Stone Tower (Tâshkand)	42° 58′	43°
Sêra Metropolis (Ho-nan)	38° 35′	33° 58′

words, "When the traveller has ascended the ravine he arrives at the Stone Tower, after which the mountains that trend to the east unite with Imaus, the range that runs up to the north from Palimbothra." § 10. If, then, to the 60 degrees made up of the 24,000 stadia, we add the $45\frac{1}{4}$ degrees which represent the distance from the Stone Tower to Sêra, we get $105\frac{1}{4}$ degrees as the distance between the Euphrates and Sêra as measured along the parallel of Rhodes.[16] § 11. But, further, we

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[16] Saint-Martin identifies Sêra, the Metropolis of the Sêres, with a site near Ho-nan-fu. He says, (*Etudes*, p. 432) "At the time when the caravan journey reported by Maës was made (in the first half of the first century of our era), the Han surnamed Eastern held the reins of government, and their residence was at Lo-yang near the present City of Ho-nan-fou, not far from the southern bank of the lower Hoang-ho. It is there then we should look to find the place which in their ignorance of the language of the country, and in their disdain for barbarous names, the Greek traders designated merely as the Metropolis of the Sêres." The road these traders took appears to have been the same by which Hiuen-Tsiang travelled towards India.

We may here insert for comparison with Ptolemy's distances two itineraries, one by Strabo and the other by Pliny. Strabo (lib. XI, c. viii, 9) says: "These are the distances which he (Eratosthenes) gives:—

	Stadia.
From the Kaspian Sea to the Kyros about	1,800
Thence to the Kaspian Gates	5,600
Thence to Alexandreia of the Areioi (Herat)	6,400
Thence to Baktra, called also Zariaspa (Balkh) ..	3,870
Thence to the Jaxartes, which Alexander reached, about	5,000
Making a total of.....	22,670."

He also assigns the following distances from the Kaspian Gates to India:—

	Stadia.
"To Hekatompylos.....	1,960
To Alexandreia of the Areioi (Herat)	4,530

can infer from the number of stadia which he gives as the distance between successive places lying along the same parallel, that the distance from the Islands of the Blest to the sacred Promontory in Spain (*Cape St. Vincent*), is 2½ degrees, and the distance thence to the mouth of the Bætis (*Guadalquivir*), the same.

	Stadia.
Thence to Prophthasia in Dranga (a little north of lake Zarah)	1,600
Thence to the City Arakhotos (Ulan Robût)	4,120
Then to Ortospana (Kâbul) on the 3 roads from Baktra	2,000
Thence to the confines of India	1,000
Which together amount to	15,300."
The sum total however is only	15,210

Pliny (lib. VI, c. xxi) says: "Diognetus and Baeton, his (Alexander's) measurers, have recorded that from the Kaspian Gates to Hekatompylos of the Parthians there were as many miles as we have stated, thence to Alexandria Arion a city built by that king, 575 miles, to Prophthasia of the Drangae 198 miles, to the town of the Arakhosii 565 miles, to Hortospanum 175 miles, thence to Alexander's town (Opianê) 50 miles. In some copies numbers differing from these are found. They state that the last-named city lay at the foot of Caucasus; from that the distance to the Cophes and Peucolatis, a town of the Indians, was 237 miles, and thence to the river Indus and town of Taxila 60 miles, to the Hydaspes, a famous river, 120 miles, to the Hypasis, no mean river [IXXXIXI] 390—which was the limit of Alexander's progress, although he crossed the river and dedicated altars on the far-off bank, as the letters of the king himself agree in stating." The Kaspian Gates formed a point of great importance in ancient Geography, and many of the meridians were measured from it. The pass has been clearly identified with that now known as the Sirdar Pass between Verâmîn and Kishlak in Khowar. Arrian states that the distance from the city of Rhagai to the entrance of the Gates was a one day's march. This was, however, a forced march, as the ruins of Rhagai (now Rai, about 5 miles from Tehran) are somewhere about 30 miles distant from the Pass.

From the Bætis to Kalpê, and the entrance of the Straits, 2½ degrees. From the Straits to Karallis in Sardinia, 25 degrees. From Karallis to Lilybaion, in Sicily, 4½ degrees. From this Cape to Pakhynos, 3 degrees. Then again, from Pakhynos to Tainaros, in Lakonia, 10 degrees. Thence to Rhodes, 8¼ degrees. From Rhodes to Issus, 11¼ degrees, and finally from Issos to the Euphrates, 2½ degrees.[17] § 12. The

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[17] I may present here the tabular form in which Mr. Bunbury (vol. 11, p. 638) exhibits the longitudes of the principal points in the Mediterranean as given by Ptolemy, and the actual longitudes of the same points computed from Ferro:

	Longitude in Ptolemy.	Real longitude E. of Ferro.
Sacred Promontory.....	2° 30′	9° 20′
Mouth of Bætis.....	5° 20′	12°
Calpe (at mouth of Straits).	7° 30′	13°
Caralis in Sardinia	32° 30′	27° 30′
Lilybæum in Sicily	37°	30° 45′
Pachynus (Prom.) in Sicily.	40°	33° 25′
Tænarus (Prom.)	50°	40° 50′
Rhodes	58° 20′	46° 45′
Issus	69° 20′	54° 30′

The same authority observes (vol. II, p. 564) "Ptolemy thus made the whole interval from the Sacred Cape to Issus, which really comprises only about 45° 15′ to extend over not less than 67 degrees of longitude, and the length of the Mediterranean itself from Calpe to Issus, to amount to 62 degrees: rather more than 20 degrees8 beyond the truth. It is easy to detect one principal source of this enormous error. Though the distances above given are reported by Ptolemy in degrees of longtitude, they were computed by Marinos himself from what he calls *stadiasmi*, that is from distances given in maritime itineraries and reported in stadia. In other words, he took the statements and estimates of preceding authorities and converted them into degrees of longitude, according to his own calculation that a degree on the equator was equal to 500 stadia, and

sum of these particular distances gives a total of 72 degrees, consequently the entire length of the known world between the meridian of the Islands of the Blest and that of the Sêres is 177¼ degrees, as has been already shown.[18]

Cap. 13.

§ 1. That such is the length of the inhabited world may also be inferred from his estimate of the distances in a voyage from India to the Gulf of the Sinai and Kattigara, if the sinuosities of the coast and irregularity of the navigation be taken into account, together with the positions as drawn into nearer proximity in the projections; for, he says, that beyond the Cape called Kôry where the Kolkhic Gulf terminates, the Argaric Gulf begins, and that the distance thence to the City of Kouroula, which is situated to the north-east of Kôry is 3,400 stadia. § 2. The

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consequently a degree of longitude in latitude 36° would be equal (approximately) to 400 stadia." The total length of the Mediterranean computed from the stadiasmoi must have been 24,800. This was an improvement on the estimate of Eratosthenes, but was still excessive. In the ancient mode of reckoning sea distances the tendency was almost uniformly towards exaggeration.

[18] The different corrections to be applied to Ptolemy's eastern longitudes have been calculated by Sir Henry Rawlinson to amount to *three-tenths*, which is within one-seventieth part of the empirical correction used by M. Gossellin. [If we take *one-fifth* from Ptolemy's longitude of a place, and deduct 17° 43′ for the W. longitude of Ferro, we obtain very approximately the modern English longitude. Thus, for Barygaza, Ptolemy's longitude is 113°15′ and 113°15′—22°39′—17°43′=72°53′, or only 5′ less than the true longitude W. of Greenwich —J.B.]

distance right across may, therefore, be estimated at about 2,030 stadia, since we have to deduct a third because of the navigation having followed the curvature of the Gulf, and have also to make allowances for irregularities in the length of the courses run. § 3. If now we further reduce this amount by a third, because the sailing, *though subject to interruption*, was taken as continuous, there remain 1,350 stadia, determining the position of Kouroula as situated north-east from Kôry. § 4. If now this distance be referred to a line running parallel to the equator and towards the East, and we reduce its length by half in accordance with the intercepted angle, we shall have as the distance between the meridian of K o u r o u l a and that of K ô r y, 675 stadia, or $1\frac{1}{3}$ degree, since the parallels of these places do not differ materially from the great circle.[19]

§ 5. But to proceed: the course of the voyage from K o u r o u l a lies, he says, to the south-east as far as P a l o u r a, the distance being 9,450 stadia. Here, if we deduct as before one-third for the irregularities in the length of the courses, we shall have the distance on account of the navigation having been continuous to

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19 By the intercepted angle is meant the angle contained by two straight lines drawn from Kôry, one running north-east to Kouroula and the other parallel to the Equator. In Ptolemy's map Kouroula is so placed that its distance in a straight line from Kôry is about double the distance between the meridians of those two places.

the south-east about 6,300 stadia. § 6. And if we deduct from this in like manner as before one-sixth, in order to find the distance parallel to the equator, we shall make the interval between the meridians of these two places 5,250 stadia, or $10\frac{1}{2}$ degrees.

§ 7. At this place the Gangetic Gulf begins, which he estimates to be in circuit 19,000 stadia. The passage across it from Paloura to Sada in a direct line from west to east is 1,300 stadia. Here, then, we have but one deduction to make, *viz.*, one-third on account of the irregularity of the navigation, leaving as the distance between the meridians of Paloura and Sada 8,670 stadia, or $17\frac{1}{3}$ degrees. § 8. The voyage is continued onward from Sada to the City of Tamala, a distance of 3,500 stadia, in a south-eastward direction. If a third be here again deducted on account of irregularities, we find the length of the continuous passage to be 2,330 stadia, but we must further take into account the divergence towards the south-east, and deduct one-sixth, so we find the distance between the meridians in question to be 1,940 stadia, or 3° 50′ nearly. § 9. He next sets down the passage from Tamala to the Golden Khersonese at 1,600 stadia, the direction being still towards the south-east, so that after making the usual deductions there remain as the distance between the two meridians 900 stadia, or 1° 48′. The

sum of these particulars makes the distance from Cape Kôry to the Golden Khersonese to be 34° 48′.

Cap. 14.

§ 1. Marinos does not state the number of stadia in the passage from the Golden Khersonese to Kattigara, but says that one Alexander had written that the land thereafter faced the south, and that those sailing along this coast reached the city of Zaba in 20 days, and by continuing the voyage from Zaba southward, but keeping more to the left, they arrived after some days at Kattigara. § 2. He then makes this distance very great by taking the expression "some days" to mean "many days," assigning as his reason that the days occupied by the voyage were too many to be counted,—a most absurd reason, it strikes me. § 3. For would even the number of days it takes to go round the whole world be past counting? And was there anything to prevent Alexander writing "many" instead of "some," especially when we find him saying that Dioskoros had reported that the voyage from Rhapta to Cape Prasum took "many days." One might in fact with far more reason take "some" to mean "a few," for we have been wont to censure this style (*of expression*).[20] § 4. So now lest we

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[20] To account for the seeming caprice which led Marinos to take the expression *some days* as equivalent to *ever so many days* it has been supposed that he had

should appear to fall ourselves into the same error, that of adapting conjectures about distances to some number already fixed on, let us compare the voyage from the Golden Khersonese to

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adopted the theory that Kattigara, the furthest point eastward that had been reached by sea, was situated nearly under the same meridian as Sêra, the furthest point in the same direction that had been reached by land. Unfortunately the expression used by Alexander *some days* did not square with this theory, and it was all the worse in consequence for that expression. "The result," says Mr. Bunbury (vol. II, p. 537), "derived by Marinos from these calculations was to place Kattigara at a distance of not less than 100 degrees of longitude, or nearly 50,000 stadia, east of Cape Kôry; and as he placed that promontory in 125½° of longitude east of the Fortunate Islands, he arrived at the conclusion that the total length of the inhabited world was, in round numbers 225°, equivalent, according to his calculation to 112,500 stadia. As he adopted the system of Poseidônios, which gave only 180,000 stadia for the circumference of the globe, he thus made the portion of it which he supposed to be known, to extend over nearly two-thirds of the whole circumference. This position of Cape Kôry, which was adopted by Ptolemy as a position well established, was already nearly 34° too far to the east; but it was by giving the enormous extension we have pointed out to the coast of Asia beyond that promontory, that he fell into this stupendous error, which though partly corrected by Ptolemy, was destined to exercise so great an influence upon the future progress of geography." Columbus by accepting Ptolemy's estimate of the circumference of the globe greatly under-estimated the distance bétween the western shores of the Atlantic and the eastern shores of Asia, and hence was led to undertake his memorable enterprise with all the greater hope and courage.

With reference to the position of Cape Kôry as given by Ptolemy, Bunbury says (vol. II, p. 537, note): "Cape Kôry is placed by Ptolemy, who on this point apparently follows Marinos, in 125° E. Longitude. It is really situated 80° E. of Greenwich and 98° E. of Ferro; but as Ptolemy made a fundamental error in the position of his primary meridian of nearly 7° this must be added to the amount of his error in this instance. He himself states that Cape Kôry was 120° E. of the mouth of the Bætis, the real difference of longitude being only 86° 20′."

Kattigara, consisting of the 20 days to Zaba and the "some days" thence to Kattigara with the voyage from Arômata to Cape Prasum, and we find that the voyage from Arômata to Rhapta took also 20 days as reported by Theophilos, and the voyage from Rhapta to Prasum "many more days" as reported by Dioskoros, so that we may set side by side the "some days" with the "many days" and like Marinos take them to be equivalent. § 5. Since then, we have shown both by reasoning and by stating ascertained facts, that Prasum is under the parallel of 16° 25′ in South latitude, while the parallel through Cape Arômata is 4° 15′ in North latitude, making the distance between the two capes 20° 40′, we might with good reason make the distance from the Golden Khersonese to Zaba and thence to Kattigara just about the same. § 6. It is not necessary to curtail the distance from the Golden Khersonese to Zaba, since as the coast faces the south it must run parallel with the equator. We must reduce, however, the distance from Zaba to Kattigara, since the course of the navigation is towards the south and the east, in order that we may find the position parallel to the equator. § 7. If again, in our uncertainty as to the real excess of the distances, we allot say one-half of the degrees to each of these distances, and from the 13° 20′ between Zaba and Kattigara we deduct a third on account of the divergence, we shall have the

distance from the Golden Khersonese to Kattigara along a line parallel to the equator of about 17° 10′. § 8 But it has been shown that the distance from Cape Kôry to the Golden Khersonese is 34° 48′, and so the entire distance from Kôry to Kattigara will be about 52°.

§ 9. But again, the meridian which passes through the source of the River Indus is a little further west than the Northern Promontory of T a p r o b a n ê, which according to Marinos is opposite to Kôry, from which the meridian which passes through the mouths of the River Bætis is a distance of 8 hours or 120° Now as this meridian is 5° from that of the Islands of the Blest, the meridian of Cape Kôry is more than 125° from the meridian of the Islands of the Blest. But the meridian through Kattigara is distant from that through the Islands of the Blest a little more than 177° in the latitude of Kôry, each of which contains about the same number of stadia as a degree reckoned along the parallel of Rhodes. § 10. The entire length then of the world to the Metropolis of the Sinai may be taken at 180 degrees or an interval of 12 hours, since it is agreed on all hands that this Metropolis lies further east than Kattigara, so that the length along the parallel of Rhodes will be 72,000 stadia.

CAP. 17, (part).

§ 3. For all who have crossed the seas to those places agree in assuring me that the district of

Sakhalitês in Arabia, and the Gulf of the same name, lie to the east of S y a g r o s, and not to the west of it as stated by Marinos, who also makes S i m y l l a, the emporium in India, to be further west not only than Cape K o m a r i, but also than the Indus. § 4. But according to the unanimous testimony both of those who have sailed from us to those places and have for a long time frequented them, and also of those who have come from thence to us, S i m y l l a, which by the people of the country is called T i m o u l a, lies only to the south of the mouths of the river, and not also to west of them. § 5. From the same informants we have also learned other particulars regarding India and its different provinces, and its remote parts as far as the Golden Khersonese and onward thence to Kattigara. In sailing thither, the voyage, they said, was towards the east, and in returning towards the west, but at the same time they acknowledged that the period which was occupied in making the voyages was neither fixed nor regular. The country of the Sêres and their Metropolis was situated to the north of the Sinai, but the regions to the eastward of both those people were unknown, abounding it would appear, in swamps, wherein grew reeds that were of a large size and so close together that the inhabitants by means of them could go right across from one end of a swamp to the other. In travelling from these parts there

was not only the road that led to Baktrianê by way of the Stone Tower, but also a road that led into India through Palimbothra. The road again that led from the Metropolis of the Sinai to the Haven at Kattigara runs in a south-west direction, and hence this road does not coincide with the meridian which passes through Sêra and Kattigara, but, from what Marinos tells us, with some one or other of those meridians that are further east.

I may conclude this prefatory matter by quoting from Mr. Bunbury his general estimate of the value of Ptolemy's Indian Geography as set forth in his criticism of Ptolemy's Map of India.

His strictures, though well grounded, may perhaps be considered to incline to the side of severity. He says (vol. II, pp. 642-3), "Some excellent remarks on the portion of Ptolemy's work devoted to India, the nature of the different materials of which he made use, and the manner in which he employed them, will be found in Colonel Yule's introduction to his Map of India, in Dr. Smith's *Atlas of Ancient Geography* (pp. 22-24). These remarks are indeed in great measure applicable to the mode of proceeding of the Alexandrian Geographer in many other cases also, though the result is particularly conspicuous in India from the fulness of the information—crude and undigested as it was—which he had managed to bring together. The result, as presented to us in the tables of Ptolemy, is a map of utter confusion, out of which it is very difficult to extract in a few instances any definite conclusions." The attempt

of Lassen to identify the various places mentioned by Ptolemy, is based throughout upon the fundamental error of supposing that the geographer possessed a Map of India similar to our own, and that we have only to compare the ancient and modern names in order to connect the two. As Col. Yule justly observes: "Practically, he (Lassen) deals with Ptolemy's compilation as if that Geographer had possessed a collection of real Indian surveys, with the data systematically co-ordinated. The fact is, that if we should take one of the rude maps of India that appeared in the 16th century (*e.g.* in Mercator or in Lindschoten), draw lines of latitude and longitude and then *more Ptolemaico* construct tables registering the co-ordinates of cities, sources and confluences as they appeared in that map, this would be the sort of material we have to deal with in Ptolemy's India." But, in fact, the case is much stronger than Col. Yule puts it. For such a map as he refers to, of the 16th century, however, rude, would give a generally correct idea of the form and configuration of the Indian Peninsula. But this, as we have seen, was utterly misconceived by Ptolemy. Hence he had to fit his data, derived from various sources such as maritime and land itineraries, based upon real experience, into a framework to which they were wholly unsuited, and this could only be effected by some Procrustean process, or rather by a repetition of such processes, concerning which we are left wholly in the dark.

Col. Yule's map of Ancient India is undoubtedly by far the best that has yet been produced: it is indeed the only attempt to interpret Ptolemy

data, upon which such a map must mainly be founded upon anything like sound critical principles. But it must be confessed that the result is far from encouraging. So small a proportion of Ptolemy's names can find a place at all, and so many of those even that appear on the map are admitted by its author to rest upon very dubious authority; that we remain almost wholly in the dark as to the greater part of his voluminous catalogues; and are equally unable to identify the localities which he meant to designate, and to pronounce an opinion upon the real value of his materials."

Book VII.

Contents.

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Cap. I.

Description of India within the Ganges.

§ 1. India within the river Ganges is bounded on the west by the Paropanisadai and Arakhôsia and Gedrôsia along their eastern sides already indicated; on the north by Mount Imaös along the Sogdiaioi and the Sakai lying above it; on the east by the river Ganges; and on the south and again on the west by a portion of the Indian Ocean. The circuit of the coast of this ocean is thus described:—

2. In Syrastrênê, on the Gulf called Kanthi, a roadstead and harbour ..109° 30′ 20°
The most western mouth of the River Indus called Sagapa .....110° 20′ 19° 50′
The next mouth called Sinthôn .....110° 40′ 19° 50′
The 3rd mouth called Khrysoun (the Golden) .....111° 20′ 19° 50′
The 4th called Kariphron .....111° 40′ 19° 50′
The 5th called Sapara .....112° 30′ 19° 50′
The 6th called Sabalaessa .....113° 20° 15′
The 7th called Lônibarê .....113° 30′ 20° 15′
3. Bardaxêma, a town.....113° 40′ 19° 40′
Syrastra, a village .....114° 19° 30′
Monoglôsson, a mart .....114° 10′ 18° 40′

Comment.—Strabo, following Eratosthenes, regarded the Indus as the boundary of India on the west, and this is the view which has been generally prevalent. Ptolemy, however, included within India

the regions which lay immediately to the west of that river, comprehending considerable portions of the countries now known as Balûchistân and Afghânistân. He was fully justified in this determination, since many places beyond the Indus, as the sequel will show, bore names of Sanskrit origin, and such parts were ruled from the earliest times down to the Muḥammadan conquests by princes of Indian descent. The western boundary as given by Ptolemy would be roughly represented by a line drawn from the mouth of the Indus and passing through the parts adjacent to Ḳandahâr, Ghaznî, Kâbul, Balkh, and even places beyond. The Paropanisadai inhabited the regions lying south of the mountain range called Paropanisos, now known as the Central Hindû-Kûsh. One of these towns was Ortospana, which has been identified with the city of Kâbul, the Karoura of our author. He gives as the eastern boundary of the Paropanisadai a line drawn south from the sources of the river Oxus through the Kaukasian Mountains (the eastern portion of the Hindû-Kûsh) to a point lying in long. 119° 30′ and lat. 39°. Arakhôsia lay to the south of the Paropanisadai—its chief city was Arakhôtos, whose name, according to Rennell, is preserved in Arokhaj. There is a river of the same name which has been identified with the Helmand (the Etymander or Erymanthos of the ancients) but also and more probably with the Urghand-âb or Arkand-âb, which passes by Ḳandahâr. Gedrôsia, the modern Balûchistân, had for its eastern boundary the River Indus. The boundary of India on the

north was formed by Mount Imaös (Sansk. *hima*, cold), a name which was at first applied by the Greeks to the Hindû-Kûsh and the chain of the Himâlayas running parallel to the equator, but which was gradually in the course of time transferred to the Bolor range which runs from north to south and intersects them. Ptolemy, however, places Imaös further east than the Bolor, and in the maps which accompany his *Geography*, this meridian chain, as he calls it, is prolonged up to the most northernly plains of the Irtish and Obi.

S o g d i a n a lay to the north of Baktria and abutted on Skythia, both towards the north and towards the west. The name has been preserved in that of Soghd, by which the country along the Kohik from Bokhârâ to Samarkand has always been known. Our author places the Sogdian Mountains (the Pâmîr range) at the sources of the Oxus, and the mountains of the K ô m ê d a i between the sources of that river and the Jaxartes.

The S a k a i were located to the east of the Sagdians—Ptolemy describes them as nomadic, as without towns and as living in woods and caves. He specifies as their tribes the K a r a t a i (probably connected with the Kirâtai of India), the K o m a r o i, the K ô m ê d a i, the M a s s a g e t a i, the G r y n a i o i S k y t h a i, the T o ö r n a i and the B y l t a i. The Sakai it would appear therefore were the Mountaineers of Kâfiristân, Badakshân, Shignân, Roshan, Baltistân, or Little Tibet, &c.

Syrastrênê and Larikê.

S y r a s t r ê n ê :—The name is formed from the Saṅskṛit Surâshṭra (now Soraṭh) the ancient

name of the Peninsula of Gujarât. It is mentioned in the *Periplûs of the Erythraean Sea* as the sea-board of Abêria, and is there praised for the great fertility of its soil, for its cotton fabrics, and for the superior stature of its inhabitants.

K a n t h i :—The Gulf of this name is now called the Gulf of Kachh. It separates Kachh, the south coast of which is still called K a n t h a, from the Peninsula of Gujarât. In the *Periplûs* the gulf is called Barakê and is described as of very dangerous navigation. In Ptolemy, Barakê is the name of an island in the Gulf.

Two mouths only of the Indus are mentioned by the followers of Alexander and by Strabo. The *Periplûs* gives the same number (7) as Ptolemy. There are now 11, but changes are continually taking place. Sagapa, the western mouth, was explored by Alexander. It separates from the main stream below Ṭhaṭha. In the chronicles of Sindh it is called Sâgâra, from which perhaps its present name Ghâra, may be derived. It has long ceased to be navigable.

S i n t h ô n :—This has been identified with the Piti branch of the Indus, one of the mouths of the Baghâr River. This branch is otherwise called the Sindhi Khrysoun. This is the Kediwârî mouth.

K h a r i p h r o n :—Cunningham identifies this with the Kyâr river of the present day which, he says, leads right up to the point where the southern branch of the Ghâra joins the main river near Lâri-bandar.

S a p a r a :—this is the Wârî mouth.

S a b a l a e s s a is now the Sir mouth.

Lonibarê in Saṅskṛit is Lôṇavâri (or Lôṇavaḍâ, or Lavaṇavâri or Lâvaṇavâṭâ).[21] It is now the Korî, but is called also the Launî which preserves the old name.

Bardaxêma:—This, according to Yule, is now Pur-bandar, but Dr. Burgess prefers Srînagar, a much older place in the same district, having near it a small village called Bardiyâ, which, as he thinks, may possibly be a reminiscence of the Greek name.

Syrastra:—This in the Prakritized form is Soraṭh. It has been identified by Lassen with Junâgaḍh, a place of great antiquity and historical interest in the interior of the Peninsula, about 40 miles eastward from the coast at Navi-bandar. The meaning of the name is *the old fort*. The place was anciently called Girnagara, from its vicinity to the sacred mountain of Girnâr, near which is the famous rock inscribed with the edicts of Aśôka, Skandagupta, and Rudra Dâma. Yule identifies Syrastra with Navi-bandar, a port at the mouth of the Bhâdar, the largest river of the Peninsula, said to be fed by 99 tributaries. Junâgaḍh was visited by Hiuen Tsiang, who states that after leaving the kingdom of Valabhî (near Bhaunagar) he went about 100 miles to the west and reached the country of Su-la-ch'a (Saurâshṭra) that was subject to the kingdom of Valabhî. See *Tarîkh-i-Soraṭh*, edited by Dr. Burgess, pp. 33-199.

Monoglôsson:—This is now represented by Mangrol, a port on the S.W. coast of the Penin-

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21 *Lavaṇa* is the Saṅskṛit word for *salt*.

sula below Navi-bandar. It is a very populous place, with a considerable traffic; and is tributary to Junâgaḍh.

4. In L a r i k ê.

Mouth of the River Môphis	114°	18° 20′
Pakidarê, a village	113°	17° 50′
Cape Maleô	111°	17° 30′

5. In the Gulf of B a r y g a z a.

Kamanê	112°	17°
Mouth of the River Namados	112°	17° 45′
Nausaripa	112° 30′	16° 30′
Poulipoula	112° 30′	16°

L a r i k ê, according to Lassen, represents the Sansk. R â s h ṭ r i k a in its Prakrit form L a ṭ i k a. Lâr-deśa, however, the country of L â r (Sansk. Lâṭa) was the ancient name of the territory of Guǰarât, and the northern parts of Koṅkaṇ, and L a r i k ê may therefore be a formation from Lâr with the Greek termination *ikê* appended. The two great cities of Barygaza (Bharoch) and Ozênê (Uǰǰain) were in Larikê, which appears to have been a political rather than a geographical division.

M a l e ô must have been a projection of the land somewhere between the mouth of the Mahî and that of Narmadâ—but nearer to the former if Ptolemy's indication be correct.

The Gulf of B a r y g a z a, now the Gulf of Khambhat, was so called from the great commercial emporium of the same name (now Bharoch) on the estuary of the Narmadâ at a distance of about 300 stadia from the Gulf. This river is called the Namados or Namadês by Ptolemy and the Namnadios by the Author of the *Periplûs*,

who gives a vivid account of the difficulties attending the navigation of the gulf and of the estuary which was subject to bores of great frequency and violence.

Kamanê is mentioned as Kammônê in the *Periplûs*, where it is located to the south of the Narmadâ estuary. Ptolemy probably errs in placing it to northward of it.

Nausaripa has been identified with Nausâri, a place near the coast, about 18 miles south from Sûrat.

Poulipoula is in Yule's map located at Sanjan, which is on the coast south from Nausâri. It was perhaps nearer Balsâr.

6. Ariakê Sadinôn.

Soupara	112° 30′	15° 30′
Mouth of the River Goaris	112° 15′	15° 10′
Dounga	111° 30′	15°
Mouth of the River Bênda	110° 30′	15°
Simylla, a mart and a cape	110°	14° 45′
Hippokoura	111° 45′	14° 10′
Baltipatna	110° 30′	14° 20′

Âriakê corresponds nearly to Mahârâshṭra—the country of the Marâṭhâs. It may have been so called, because its inhabitants being chiefly Aryans and ruled by Indian princes were thereby distinguished from their neighbours, who were either of different descent or subject to foreign domination. The territory was in Ptolemy's time divided among three potentates, one of whom belonged to the dynasty of the Sadineis and ruled the prosperous trading communities that occupied the seaboard. This dynasty

is mentioned in the *Periplûs* (cap. 52) whence we learn that Sandanes after having made himself master of Kalliena (now Kalyâṇa), which had formerly belonged to the house of Saraganes the elder, subjected its trade to the severest restrictions, so that if Greek vessels entered its port even accidentally, they were seized and sent under guard to Barygaza, the seat evidently of the paramount authority. Sadanes, according to Lassen, corresponds to the Sańskṛit word Sâdhana, which means *completion* or *a perfecter*, and also an agent or representative. By Saraganes is probably indicated one of the great Śâtakarṇi or Andhra dynasty. The *Periplûs* makes Ariâkê to be the beginning of the kingdom of Mambares and of all India.

Soupara has been satisfactorily identified by Dr. Burgess with Supârâ, a place about 6 miles to the north of Vasai (Bassein). It appears to have been from very early times an important centre of trade, and it was perhaps the capital of the district that lay around it. Among its ruins have been preserved some monuments, which are of historical interest, and which also attest its high antiquity. These are a fragment of a block of basalt like the rocks of Girnâr, inscribed with edicts of Aśôka, and an old Buddhist Stûpa. The name of Supârâ figures conspicuously in the many learned and elaborate treatises which were evoked in the course of the famous controversy regarding the situation of Ophir to which Solomon despatched the ships he had hired from the Tyrians. There can now be little doubt that if Ophir did not mean India itself it designated

some place in India, and probably Supârâ, which lay on that part of the coast to which the traders of the west, who took advantage of the monsoon to cross the ocean, would naturally direct their course. The name moreover of Supârâ is almost identical with that of Ophir when it assumes, as it often does, an initial S, becoming Sôphara as in the *Septuagint* form of the name, and Sofir which is the Coptic name for India, not to mention other similar forms. (See Benfey's *Indien*, pp. 30-32.)

The mouths of the Goaris and Bênda Yule takes to be the mouths of the Strait that isolates Salsette and Bombay. The *names* represent, as he thinks, those of the Gôdâvarî and Bhîma respectively, though these rivers flow in a direction different from that which Ptolemy assigns to them, the former discharging into the Bay of Bengal and the latter into the Kṛishṇâ, of which it is the most considerable tributary. Ptolemy's rivers, especially those of the Peninsula, are in many instances so dislocated, that it is difficult to identify them satisfactorily. It appears to have been his practice to connect the river-mouths which he found mentioned in records of coasting voyages with rivers in the interior concerning which he had information from other sources, and whose courses he had only partially traced. But, as Yule remarks, with his erroneous outline of the Peninsula this process was too hazardous and the result often wrong. Mr. J. M. Campbell, Bo.C.S., would identify the Goaris with the Vaitarna River, as Gore is situated upon it and was probably the

highest point reached by ships sailing up its stream. The sources of the Vaitarna and the Gôdâvarî are in close propinquity. The Bênda he would identify with the Bhîwandî River, and the close similarity of the names favours this view.

D o u n g a is placed in Yule's map to the S.E. of Supârâ on the Strait which separates Salsette from the mainland. Ptolemy, however, through his misconception of the configuration of this part of the coast, places it a whole degree to the west of Supârâ. Mr. Campbell, from some similarity in the names, suggests its identity with Dugâḍ—a place about 10 miles N. of Bhîwandî and near the Vaǰrabâî hot springs. Dugâḍ, however, is too far inland to have been here mentioned by Ptolemy, and moreover, it lies to the north of Supârâ, whereas in Ptolemy's enumeration, which is from north to south, it is placed after it.

S i m y l l a :—Yule identifies this with Chaul and remarks: "Chaul was still a chief port of Western India when the Portuguese arrived. Its position seems to correspond precisely both with Simylla and with the Ṣaimûr or Jaimûr (*i.e.* Chaimur, the Arabs having no *ch*) of the Arabian geographers. In Al-Bîrûnî the coast cities run: Kambâyat, Bahruj, Sindân (Sanǰân), Sufâra (Supârâ), Tana (near Bombay). "There you enter the country of Lârân, where is Jaimûr." Istakhri inverts the position of Sindân and Sufâra, but Ṣaimûr is still furthest south." In a note he adds: "Ptolemy mentions that Simylla was called by the natives Timula (probably Tiamula); and

putting together all these forms, Timula, Simylla, Ṣaimûr, Chaimûr, the real name must have been something like Chaimul or Châmul, which would modernize into Chaul, as Chamari and Prâmara into Chauri and Pawâr." Chaul or Chêṅwal lies 23 miles S. of Bombay. Paṇḍit Bhagvânlâl Indraji, Ph.D., suggested as a better identification Chimûla in Trombay Island, this being supported by one of the Kaṇhêri inscriptions in which Chimûla is mentioned, apparently as a large city, like Supârâ and Kalyâṇa in the neighbourhood. Mr. Campbell thus discusses the merits of these competing identifications :—"Simylla has a special interest, as Ptolemy states that he learned some of his Geography of Western India from people who traded to Simylla and had been familiar with it for many years, and had come from there to him—Ptolemy speaks of Simylla as a point and emporium, and the author of the *Periplûs* speaks of it as one of the Koṅkaṇ local marts. Simylla till lately was identified with Chaul. But the discovery of a village Chembur on Trombay Island in Bombay Harbour, has made it doubtful whether the old trade centre was there or at Chaul. In spite of the closer resemblance of the names, the following reasons seem to favour the view that Chaul, not Chimûla, was the Greek Simylla. First, it is somewhat unlikely that two places so close, and so completely on the same line of traffic as Kalyâṇ (the Kalliena of the *Periplûs*) and Chimûla should have flourished at the same time. Second, the expression in the *Periplûs* 'below (μετα) Kalliena other local marts are Semulla' points to some place down the coast rather than

to a town in the same Harbour as Kalliena, which according to the Author's order north to south should have been named before it. Third, Ptolemy's point (promontorium of Simylla has no meaning if the town was Chembur in Trombay. But it fits well with Chaul, as the headland would then be the south shore of Bombay Harbour, one of the chief capes in this part of the coast, the south head of the gulf or bay whose north head is at Bassein. This explanation of the Simylla point is borne out by Fryer (1675) *New Account* (pp. 77-82), who talked of Bombay 'facing Chaul' and notices the gulf or hollow in the shore stretching from Bassein to Chaul Point. The old (1540) Portuguese name 'Chaul Island' for the isle of Kennery of the south point of Bombay, further supports this view." Ptolemy's map gives great prominence to the projection of land at Simylla, which (through a strange misconception on his part, for which it is impossible to account) is therein represented as the great south-west point of India, whence the coast bends at once sharply to the east instead of pursuing its course continuously to the south.

Hippokoura:—This word may be a Greek translation (in whole or in part) of the native name of the place. Hence Paṇdit Bhagvânlâl Indraji was led to identify it with Ghoḍabandar (Horse-port) a town on the Ṭhaṇa Strait, whose position however is not in accordance with Ptolemy's data. Mr. Campbell again has suggested an identification free from this objection. Ghoṛegâoṅ (Horse-village) in Kolâba, a place at the head of a navigable river, which was once a

seat of trade. Yule takes it, though doubtingly, as being now represented by Kuḍâ near Râjapûr. Hippokourios was one of the Greek epithets of Poseidôn. Ptolemy mentions another H i p p o-k o u r a, which also belonged to Ariâkê and was the Capital of Baleokouros. Its situation was inland.

B a l t i p a t n a:—This place is mentioned in the *Periplûs* under the somewhat altered form P a l a i-p a t m a i. Yule locates it, but doubtingly, at Daibal. Fra Paolino identified it with Balaer-patam (the Baleopatam of Rennell) where the king of Cananor resided, but it lies much too far south to make the identification probable. Mr. Campbell has suggested Pali, which he describes as "a very old holy town at the top of the Nagôtna river." Its position, however, being too far north and too far from the sea, does not seem to suit the requirements.

7. (A r i a k ê) of the Pirates.

Mandagara	113°	14°
Byzanteion	113° 40′	14° 40′
Khersonêsos	114° 20′	14° 30′
Armagara	114° 20′	14° 20′
Mouth of the River Nanagouna	114° 30′	13° 50′
Nitra, a mart	115° 30′	14° 40′

Ariakê.

Piracy, which from very early times seems to have infested, like a pernicious parasite, the commerce of the Eastern Seas, flourished nowhere so vigorously as on the Koṅkaṇ Coast, along which richly freighted merchantmen were continually plying. Here bands of pirates, formed into regularly organized communities like those

of the Ṭhags in the interior of the country, had established themselves in strongholds contiguous to the creeks and bays, which were numerous on the coast, and which afforded secure harbourage to their cruisers. The part of the coast which was subject to their domination and which was in consequence called the Pirate Coast, extended from the neighbourhood of Simylla to an emporium called Nitra, the Mangaruth of Kosmas and the Mangalûr of the present day. Whether the native traders took any precautions to protect their ships from these highwaymen of the ocean is not known, but we learn from Pliny, that the merchantmen which left the Egyptian ports heading for India carried troops on board well-armed for their defence. Mr. Campbell has ingeniously suggested that by *'Ανδρῶν Πειρατῶν* Ptolemy did not mean pirates, but the powerful dynasty of the Ândhrabhṛitya that ruled over the Koṅkoṇ and some other parts of the Dekhan. He says (*Bombay Gazetteer*, Thâna, vol. II., p. 415 n. 2nd), "Perhaps because of Pliny's account of the Koṅkaṇ pirates, Ptolemy's phrase *Ariâkê Andrōn Peiratōn* has been taken to mean Pirate Ariâkê. But Ptolemy has no mention of pirates on the Koṅkaṇ Coast, and, though this does not carry much weight in the case of Ptolemy, the phrase *Andrōn Peiratōn* is not correct Greek for pirates. This and the close resemblance of the words suggest that *Andrōn Peiratōn* may originally have been Andhrabhrityon." On this it may be remarked, that though Ptolemy has no mention of pirates on the Koṅkaṇ Coast this is not in the least sur-

prising, since his work is almost exclusively geographical, and whatever information on points of history we obtain from it is more from inference than direct statement. Further, I do not see why the expression *ἀνδρῶν Πειρατῶν* if taken to mean pirates should be called incorrect Greek, since in latter Attic it was quite a common usage to join *ἀνήρ* with titles, professions and the like.

Mandagara:—This may be a transliteration, somewhat inexact, of Madangaṛh (House of Love) the name of a fort about 12 miles inland from Bankûṭ. More likely the place is Mândlâ on the north bank of the Sautrî river, opposite Bankûṭ, and now known as Kolmândlâ and Bâg and Bâgmândlâ. Mangalûr, to which as far as the name goes it might be referred, is too far south for the identification.

Byzanteion:—The close correspondence of this name with that of the famous capital on the Bosporos has led to the surmise that a colony of Greek had established themselves on this coast for commercial purposes, notwithstanding the danger to be apprehended from attacks by the pirates in their neighbourhood. It appears however quite unlikely the Greeks should have formed a settlement where few, if any, of the advantages could be enjoyed which generally determined their choice of a locality in which to plant a colony. The name may perhaps be a transliteration of Vijayanta, now Vijayadurga, the south entrance of the Vâghotan river in Ratnagiri. The word means the Fort of Victory.

Khersonêsos:—This seems to be the peninsula which is in the neighbourhood of Goa. It is

mentioned in the *Periplûs* as one of the haunts of the pirates, and as being near the island of the Kaineitai, that is, St. George's Island.

Armagara:—This is placed near the mouth of the Nanagouna river, which may be taken to mean here the river on which Sadâśivagaṛh stands. The Nanagouna however must be identified with the Tâpti, whose embouchure is about 6° farther north. Its name is Saṅskṛit, meaning 'possessed of many virtues.' To account for this extraordinary dislocation, Yule supposes that Ptolemy, having got from his Indian lists a river Nânâguna rising in the Vindhyas, assigns to it three discharges into the sea by what he took for so many delta branches, which he calls respectively Goaris, Benda, and Nanaguna. This, he adds, looked possible to Ptolemy on his map, with its excessive distortion of the western coast and his entire displacement of the western Ghâts. Mr. Campbell suggests that Ptolemy may have mistaken the Nânâ Pass for a river.

Nitra is the most southern of the pirate ports, and is mentioned by Pliny in a passage where he remarks that ships frequenting the great emporium of Mouziris ran the risk of being attacked by pirates who infested the neighbourhood, and possessed a place called Nitra. Yule refers it as has been already stated to Mangalur.

8. Limyrikê.

Tyndis, a city	116°	14° 30′
Bramagara	116° 45′	14° 20′
Kalaikarias	116° 40′	14°
Mouziris, an emporium	117°	14°

Mouth of the River Pseudostomos	117° 20′	14°
Podoperoura	117° 40′	14° 15′
Semnê	118°	14° 20′
Koreoura	118° 40′	14° 20′
Bakarei	119° 30′	14° 30′
Mouth of the River Baris	120°	14° 20′

Limyrikê:—Lassen was unable to trace this name to any Indian source, but Caldwell has satisfactorily explained its origin. In the introduction to his *Dravidian Grammar* he states (page 14), that in the Indian segment of the Roman maps called the *Peutinger Tables* the portion of India to which this name is applied is called Damirike, and that we can scarcely err in identifying this name with the Tamiḷ country, since Damirike evidently means *Damir-ikê*. In the map referred to there is moreover a district called Scytia Dymirice, and it appears to have been this word which by a mistake of Δ for Δ Ptolemy wrote Lymirike. The D, he adds, retains its place in the *Cosmography* of the Geographer of Ravenna, who repeatedly mentions Dimirica as one of the 3 divisions of India. Ptolemy and the author of the *Periplûs* are at one in making Tyndis one of the first or most northern ports in Limyrikê. The latter gives its distance from Barygaza at 7,000 stadia, or nearly 12 degrees of latitude, if we reckon 600 stadia to the degree. Notwithstanding this authoritative indication, which makes Limyrikê begin somewhere near Kalikat (11° 15′ N. lat.) its frontier has generally been placed nearly 3 degrees further north, Tyndis having

been located at Barcelôr. This error has been rectified by Yule, whose adherence to the data of the *Periplûs* has been completely justified by the satisfactory identification of Mouziris (the southern rival in commercial prosperity of Barygaza) with Kranganur, instead of with Mangalur as previously accepted. The capital of Limyrikê was Karûr, on the Kâvêrî, where resided Kêrobothros, *i.e.*, Kêralaputra, the Chêra king.

Tyndis is described in the *Periplûs* as a place of great note pertaining to the kingdom of Kêprobotras, and situate near the sea at a distance of 500 stadia from Mouziris. This distance north from Kranganur with which, as has been stated, Mouziris has been identified, brings us to Tanûr. "Tanûr itself," says Yule, "may be Tyndis; it was an ancient city, the seat of a principality, and in the beginning of the 16th century had still much shipping and trade. Perhaps, however, a more probable site is a few miles further north, Kaḍaluṇḍi, *i.e.* Kaḍal-tuṇḍi, 'the raised ground by the sea,' standing on an inlet 3 or 4 miles south of Bêpur. It is not now a port, but persons on the spot seem to think that it must formerly have been one, and in communication with the Backwater." He adds in a note supplied by Dr. Burnell, "The composition of *Kaḍal* and *Tuṇḍi* makes *Kaḍaluṇḍi* by Tamiḻ rules." The pepper country called Kottonarike was immediately adjacent to Tyndis, which no doubt exported great quantities of that spice.

Bramagara is placed in the table half a degree to the east of Tyndis, *i.e.*, really to the south of it, since Ptolemy makes the Malabar

Coast run east instead of south. The name may be a transliteration of the Sanskrit *Brahmâgâra*, which means 'the abode of the Brâhmaṇs.' The Brâhmaṇs of the south of India appear in those days to have consisted of a number of isolated communities that were settled in separate parts of the country, and that were independent each of the other. This, as Lassen remarks (*Ind. Alt.*, vol. III, p. 193) is in harmony with the tradition according to which the Ârya Brâhmaṇs were represented as having been settled by Paraśurâma in 61 villages, and as having at first lived under a republican constitution. In section 74 Ptolemy mentions a town called Brâhmê belonging to the Brâhmaṇoi Magoi, *i.e.*, 'sons of the Brâhmaṇs.'

K a l a i k a r i a s:—The last half of this word (*Karias*) is doubtless the Tamiḻ word for "coast," *karei*, which appears also in another of Ptolemy's names, Peringkarei, mentioned as one of the inland towns Kandionoi (sec. 89). I find in Arrowsmith's large Map of India a place called 'Chalacoory' to the N.E. of Kranganur, and at about the same distance from it as our author makes Kalaikarias distant from Mouziris.

M o u z i r i s may unhesitatingly be taken to, represent the Muyiri of Muyiri-Koḍu, which says Yule, appears in one of the most ancient of Malabar inscriptions as the residence of the King of Kaḍangalur or Kranganur, and is admitted to be practically identical with that now extinct city. It is to Kranganur he adds that all the Malabar traditions point as their oldest seaport of renown; to the Christians it was the landing-place of St. Thomas the Apostle.

Mouth of the river Pseudostomos, or 'false-mouth.' According to the table the river enters the sea at the distance of ⅓ of a degree below Mouziris. It must have been one of the streams that discharge into the Backwater.

Podoperoura must be the Poudopatana of Indikopleustês—a word which means 'new town,' and is a more correct form than Ptolemy's Podoperoura.

Semnê:—The Sanskrit name for Buddhist Ascetics was *Śramaṇa*, in Tamil *Śamaṇa*, and as we find that this is rendered as *Semnoi* by Clemens Alexandrinus, we may infer that Semnê was a town inhabited by Buddhists, having perhaps a Buddhist temple of noted sanctity. For a different explanation see Lassen's *Ind. Alt.* vol. III, p. 194.

Bakarei is mentioned by Pliny as Becare, and as Bakarê by the Author of the *Periplûs*, who places it at the mouth of the river on which, at a distance of 120 stadia from the sea was situated the great mart called Nelkynda, or Melkynda as Ptolemy writes it. The river is described as difficult of navigation on account of shallows and sunken reefs, so that ships, despatched from Nelkynda were obliged to sail down empty to Bakarê and there take in their cargoes. The distance of Nelkynda from Mouziris is given at about 500 stadia, and this whether the journey was made by sea or by river or by land. Upon this Yule thus remarks: "At this distance south from Kranganur we are not able to point to a quite satisfactory Nelkynda. The site which has been selected as the most probable is nearly 800

stadia south of Mouziris. This is Kallaḍa, on a river of the same name entering the Backwater, the only navigable river on this south-west coast except the Perri-âr near Kranganur. The Kallaḍa river is believed to be the *Kanĕṭṭi* mentioned in the Kêralotatti legendary history of Malabar, and the town of Kallaḍa to be the town of Kanĕṭṭi. It is now a great entrepôt of Travankor pepper, which is sent from this to ports on the coast for shipment. That Nelkynda cannot have been far from this is clear from the vicinity of the *Πυῤῥόν ὄρος* or *Red-Hill* of the *Periplûs* (sec. 58). There can be little doubt that this is the bar of red laterite which, a short distance south of Quilon, cuts short the Backwater navigation, and is thence called the Warkallê barrier. It forms abrupt cliffs on the sea, without beach, and these cliffs are still known to seamen as the *Red Cliffs*. This is the only thing like a sea cliff from Mount d'Ely to Cape Comorin." The word Bakarei may represent the Sanskrit *dvâraka*, 'a door.'

Mouth of the river Baris:—The Baris must be a stream that enters the Backwater in the neighbourhood of Quilon.

9. Country of the Aïoi.

Melkynda	120° 20′	14° 20′
Elangkôn (or Elangkôr), a mart	120° 40′	14°
Kottiara, the metropolis	121°	14°
Bammala	121° 20′	14° 15′
Komaria, a cape and town	121° 45′	13° 30′

Limirike and country of the Aïoi.

The Aïoi:—This people occupied the southern parts of Travankor. Their name is perhaps a transliteration of the Sanskrit *ahi*, 'a snake,' and if so, this would indicate the prevalence among them of serpent worship. Cunningham, in his *Geography of Ancient India* (p. 552), states that in the Chino-Japanese Map of India the alternative name of Malyakûṭa is Hai-an-men, which suggests a connection with Ptolemy's Aïoi. I note that the entrance to the Backwater at Kalikoulan is called the Great Ayibicca Bar, and an entrance farther south the Little Ayibicca Bar. The first part of this name may also be similarly connected.

Melkynda, as already stated is the Nelkynda of the *Periplûs*, which places it, however, in Limyrikê. Pliny speaks of it as *portus gentis Neacyndon* (v. ll. Neacrindon, Neachyndon, Nelcyndon.) The name, according to Caldwell, probably means West Kynda, that is Kannetri, the south boundary of Kêrala Proper. When Mangalur was taken as the representative of Mouziris, Nelkynda was generally identified with Nelisuram, which besides the partial resemblance of its name, answered closely in other respects to the description of Nelkynda in the *Periplûs*—*Cff.* C. Müller, *not. ad Peripl.*, *Sec.* 54. Lassen, *Inp. Alt.*, vol. III. p. 190. Bunbury, *Hist. of Anc. Geog.* vol. I. pp. 467-8.

Elangkôn or Elangkôr is now Quilon, otherwise written Kulam.

"Kottiara," says Caldwell, "is the name of a place in the country of the Aïoi of Ptolemy in the Paralia of the Author of the *Periplûs*, identical

in part with South Travankor. Apparently it is the Cottara of Pliny, and I have no doubt it is the Cottara of the *Peutinger Tables*. It is called by Ptolemy the Metropolis, and must have been a place of considerable importance. The town referred to is probably Kôttâra, or as it is ordinarily written by Europeans 'Kotaur,' the principal town in South Travankor, and now as in the time of the Greeks distinguished for its commerce." *Dravid-Gram.*, Introd. p. 98. The name is derived from *kôḍ* 'a foot,' and *âr-û* 'a river.'

B a m m a l a:—Mannert would identify this with Bulita, a place a little to the north of Anjenga, but this is too far north. It may perhaps be the Balita of the *Periplûs*.

K o m a r i a, a cape and a town:—We have no difficulty in recognizing here Cape Comorin, which is called in the *Periplûs* Komar and Komarei. The name is derived from the Sanskrit *kumâri*, 'a virgin,' one of the names of the Goddess Dûrgâ who presided over the place, which was one of peculiar sanctity. The Author of the *Periplûs* has made the mistake of extending the Peninsula southward beyond Comorin.

We may here compare Ptolemy's enumeration of places on the west coast with that of the *Periplûs* from Barygaza to Cape Comorin.

Ptolemy.	*Periplûs.*
Barygaza	Barygaza
Nousaripa	Akabarou
Poulipoula	
Soupara	Souppara
Dounga	Kalliena

Ptolemy.	*Periplûs.*
Simylla	Semylla
Island of Milizêgyris	Mandagora
Hippokoura	
Baltipatna	Palaipatmai
Mandagora	Melizeigara
Is. of Heptanêsia	
Byzanteion	Byzantion
	Toparon
	Tyrannosboas
	3 separate groups of islands
Khersonêsos	Khersonêsos
Armagara	Is. of Leukê
Is. of Peperine	
Nitra	Naoura
Tyndis	Tyndis
Trinêsia Islands	
Bramagara	
Kalaikarias	
Mouziris	Mouziris
Podoperoura	
Semnê	
Is. Leukê	
Koreoura	
Melkynda	Nelkynda
Bakarei	Bakarê
Elangkôn	Mons Pyrrhos
Kottiara	
Bammola	Balita
Komaria	Komar.

There is a striking agreement between the two lists, especially with respect to the order in

which the places enumerated succeed each other. There are but three exceptions to the coincidence and these are unimportant. They are, Milize-gyris, Mandagora and the Island Leukê, i.e. 'white island,' if the name be Greek. The Melizeigara of the *Periplûs*, Vincent identifies with Jayagaḍh or Sidi, perhaps the Sigerus of Pliny (lib. VI, c. xxvi, 100). Ptolemy makes Milizêgyris to be an island about 20 miles south of Simylla-There is one important place which he has failed to notice, Kalliena now Kalyâṇa, a well-known town not far from Bombay.

10. Country of the K a r e o i.

In the Kolkhic Gulf, where there is the Pearl Fishery :—

Sôsikourai.....	122°	14°30′
Kolkhoi, anemporium.....	123°	15°
Mouth of the river Sôlên.....	124°	14°40′

The country of the K a r e o i corresponds to South Tinneveli. The word *karei*, as already stated is Tamiḻ, and means 'coast.' The Kolkhic Gulf is now known as the Gulf of Manâr. The pearl fishery is noticed in the *Periplûs*.

S ô s i k o u r a i :—By the change of S into T we find the modern representative of this place to be Tutikorin (Tuttukuḍi) a harbour in Tinneveli, where there are pearl banks, about 10 miles south of Kolkhoi. This mart lay on the Sôlên or Tâmraparṇî river. Tutikorin in the *Peutinger Tables* is called *Colcis Indorum*. The Tamiḻ name is Kolkei, almost the same as the Greek. Yule in his work on Marco Polo (vol. II, pp. 360-61) gives the following account of this

place, based on information supplied by Dr. Caldwell :—

"Kolkhoi, described by Ptolemy and the Author of the *Periplûs* as an emporium of the pearl trade, as situated on the sea-coast to the east of Cape Comorin, and as giving its name to the Kolkhic Gulf or Gulf of Manâr has been identified with Korkai, the mother-city of Kayal (the Coël of Marco Polo). Korkai, properly Kolkai (the *l* being changed into *r* by a modern refinement, it is still called Kolka in Malayalam), holds an important place in Tamiḻ traditions, being regarded as the birth-place of the Pâṇḍya dynasty, the place where the princes of that race ruled previously to their removal to Madurâ. One of the titles of the Pâṇḍya kings is 'Rules of Korkai.' Korkai is situated two or three miles inland from Kayal, higher up the river. It is not marked in the G. Trig. Surv. map, but a village in the immediate neighbourhood of it called Mâramangalam 'the good fortune of the Pâṇḍyas' will be found in the map. This place, together with several others in the neighbourhood, on both sides of the river, is proved by inscriptions and relics to have been formerly included in Korkai, and the whole intervening space between Korkai and Kayal exhibits traces of ancient dwellings. The people of Kayal maintain that their city was originally so large as to include Korkai, but there is much more probability in the tradition of the people of Korkai, which is to the effect that Korkai itself was originally a sea-port; that as the sea retired it became less and less suitable for trade, that Kayal rose as Korkai

fell, and that at length, as the sea continued to retire, Kayal also was abandoned. They add that the trade for which the place was famous in ancient times was the trade in pearls."

Mouth of the River S ô l ê n:—This river is identified by Lassen with the Sylaur, which he says is the largest northern tributary of the Tâmraparṇî. On this identification Yule remarks:—"The 'Syllâr' of the maps, which Lassen identifies with Sôlên, originates, as Dr. Caldwell tells me, in a mistake. The true name is 'Sitt-âr,' 'Little River,' and it is insignificant." The Tâmraparṇî is the chief river of Tinneveli. It entered the sea south of Kolkhoi. In Tamiḻ poetry it is called Porunei. Its Pâli form is Tambapanni. How it came to be called the Sôlên remains as yet unexplained. *Śôḷa* is an element in several South Indian geographical names, meaning Chôḷa. The word Tâmraparṇî itself means 'red-leaved' or 'copper-coloured sand.' Taprobane, the classical name for Ceylon, is this word in an altered form.

11. Land of P a n d i o n.

In the Orgalic Gulf, Cape		
Kôry, called also Kalligikon	125° 40′	12° 20′
Argeirou, a town	125° 15′	14° 30′
Salour, a mart	125° 20′	15° 30′

The land of P a n d i o n included the greater portion of the Province of Tinneveli, and extended as far north as to the highlands in the neighbourhood of the Koimbatur gap. Its western boundary was formed by the southern range of the Ghâts, called by Ptolemy Mount Bêttigô, and it had a sea-board on the east, which extended for some

distance along the Sinus Orgalicus, or what is now called Palk's Passage.

The Author of the *Periplûs* however, assigns it wider limits, as he mentions that Nelkynda, which lay on the Malabar Coast, as well as the pearl-fishery at Kolkhoi, both belonged to the Kingdom of Pandion. The kingdom was so called from the heroic family of the Pâṇḍya, which obtained sovereign power in many different parts of India. The Capital, called Madurâ, both by Pliny and by our author, was situated in the interior. Madurâ is but the Tamiḷ manner of pronouncing the Sanskrit *Mathurâ*, which also designated the sacred city on the Jamnâ famous as the birthplace and the scene of the exploits of Kṛishṇa, who assisted the Pâṇḍus in their war with the Kurus. The city to this day retains its ancient name, and thus bears, so to speak, living testimony to the fact that the Âryans of Northern India had in early times under Pâṇḍya leaders established their power in the most southern parts of the Peninsula.

The O r g a l i c G u l f lay beyond the Kolkhic Gulf, from which it was separated by the Island of Râmêśvaram and the string of shoals and small islands which almost connect Ceylon with the mainland. It derived its name from Argalou, a place mentioned in the *Periplûs* as lying inland and celebrated for a manufacture of muslin adorned with small pearls. The northern termination of the gulf was formed by Cape Kalimîr.

C a p e K ô r y:—Ptolemy makes Kôry and Kalligikon to be one and the same cape. They are

however distinct, Kôry being the headland which bounded the Orgalic Gulf on the south, and Kalligikon being Point Kalimîr, which bounded it on the north. The curvature of this Gulf was called by the Hindûs Râmadhanuḥ, or '*Râma's bow*,' and each end of the bow Dhanuḥ-kôṭi or simply Kôṭi. The Sanskrit word *kôṭi* (which means '*end*, *tip* or *corner*') becomes in Tamiḻ *kôḍi*, and this naturally takes the form of Kôṛi or Kôry. The southern Kôṭi, which was very famous in Indian story, was formed by the long spit of land in which the Island of Râmêśvaram terminates. It is remarkable, as Caldwell remarks, that the Portuguese, without knowing anything of the *Kῶρυ* of the Greeks, called the same spit of land Cape Ramancoru. Ptolemy's identification of Cape Kôry with Kalligikon or Point Kalimîr is readily explained by the fact just stated that each of these projections was called Kôṭi.

This word Kôṭi takes another form in Greek and Latin besides that of Kôry, viz., Kôlis, the name by which Pomponius Mela and Dionysios Periêgêtês (v. 1148) designate Southern India. The promontory is called Coliacum by Pliny, who describes it as the projection of India nearest Ceylon, from which it was separated by a narrow coral sea. Strabo (lib. XV, c. i, 14) quoting Onêsikritos, speaks of Taprobane as distant from the most southern parts of India, which are opposite the Kôniakoi, 7 days' sail towards the south. For Kôniakoi the reading Kôlîakoi has been with reason suggested.

Ptolemy, like the author of the *Periplûs* and other writers, regarded Cape Kôry as the most

important projection of India towards the south, and as a well-established point from which the distances of other places might conveniently be calculated. He placed it in 125 degrees of E. longitude from Ferro, and at 120 degrees east of the mouth of the River Bætis in Spain from which, however, its distance is only 86⅓ degrees. Its latitude is 9° 20′ N. and that of Cape Comorin 8° 5′, but Ptolemy makes the difference in latitude to be only 10′.

The identity of Kalligikon with Point Kalimîr has already been pointed out. *Calimere* is a corrupt form of the Tamiḻ compound Kallimeḍu, *Euphorbia eminence*, and so the first part of the Greek name exactly coincides with the Tamiḻ Kaḷḷi, which means the *Euphorbia* plant, or perhaps a kind of cactus. Pliny mentions a projection on the side of India we are now considering which he calls Calingon, and which the similarity of name has led some to identify with Kalligikon, and therefore with Point Kalimîr. It seems better, however, taking into account other considerations which we need not here specify, to identify this projection with Point Gôdâvarî.

Before concluding this notice we may point out how Ptolemy has represented the general configuration of the eastern coast beyond the Orgalic Gulf. His views here are almost as erroneous as those he entertained concerning the west coast, which, it will be remembered, he did not carry southward to Cape Comorin, but made to terminate at the point of Simylla, thus effacing from the Map of India the whole of the Peninsula.

The actual direction of the east coast from point Kalimîr is first due north as far as the mouths of the Kṛishṇâ, and thereafter north-east up to the very head of the Bay of Bengal. Ptolemy, however, makes this coast run first towards the south-east, and this for a distance of upwards of 600 miles as far as Paloura, a place of which the site has been fixed with certainty as lying near the southern border of Kaṭak, about 5 or 6 miles above Ganjâm. Ptolemy places it at the extremity of a vast peninsula, having for one of its sides the long stretch of coast just mentioned, and he regards it also as marking the point from which the Gangetic Gulf begins. The coast of this gulf is made to run at first with an inclination to westward, so that it forms at its outlet the other side of the peninsula. Its curvature is then to the north-east, as far as to the most eastern mouth of the Ganges, and thence its direction is to the south-east till it terminates at the cape near Têmala, now called Cape Negrais, the south-west projection of Pegu.

12. Country of the B a t o i.

Nikama, the Metropolis	126°	16°
Thelkheir	127°	16° 10′
Kouroula, a town	128°	16°

13. In P a r a l i a specially so called: the country of the T ô r i n g o i.

Mouth of the River Khabêros	129°	15° 15′
Khabêris, an emporium	128° 30′	15° 40′
Sabouras, an emporium	130°	14° 30′

The B a t o i occupied the district extending from the neighbourhood of Point Kâlimîr to the

southern mouth of the River Kâvêrî and corresponding roughly with the Province of Tanjore.

N i k a m a, the capital, has been identified with Nagapatam (Nâgapaṭṭanam) by Yule, who also identifies (but doubtingly) Thelkyr with Nagor and Kouroula with Karikal.

P a r a l i a, as a Greek word, designated generally any maritime district, but as applied in India it designated exclusively (*ἰδίως*) the seaboard of the Tôringoi. Our author is here at variance with the *Periplûs*, which has a Paralia extending from the Red Cliffs near Quilon to the Pearl-Fishery at the Kolkhoi, and comprising therefrom the coast-lines of the Aïoi and the Kareoi. "This Paralia," says Yule, "is no doubt Purali, an old name of Travankor, from which the Râja has a title *Purališaṅ*, 'Lord of Purali.' But the "instinctive striving after meaning" which so often modifies the form of words, converted this into the Greek *Παραλία*,, 'the coast.' Dr. Caldwell however inclines rather to think that *Paralia* may possibly have corresponded to the native word meaning *coast* viz. *karei*.

In sec. 91, where Ptolemy gives the list of the inland towns of the T ô r i n g o i, he calls them the Sôrêtai, mentioning that their capital was Orthoura, where the king, whose name was Sôrnagos, resided. In sec. 68 again he mentions the Sôrai as a race of nomads whose capital was Sôra where their king, called Arkatos, resided. Caldwell has pointed out the identity of the different names used to designate this people. *Σώρα*, he says, "which we meet alone and in various combinations in these (Ptolemy's) notices represents the

name of the northern portion of the Tamilian nation. This name is Chôla in Sanskrit, Chôḷa in Telugu, but in Tamiḻ Sôṛa or Chôṛa. The accuracy with regard to the name of the people is remarkable, for in Tamiḻ they appear not only as Sôṛas, but also as Sôṛagas and Sôṛiyas, and even as Sôṛingas. Their country also is called Sôṛagam. The *r* of the Tamiḻ word Sôṛa is a peculiar sound not contained in Telugu, in which it is generally represented by *ḍ* or *ḷ*. The transliteration of this letter as *r* seems to show that then, as now, the use of this peculiar *ṛ* was a dialectic peculiarity of Tamiḻ."

The River K h a b ê r o s is the Kâvêrî. *Kâvêra* is the Sanskrit word for *saffron*. Kâvêrî, according to a legend in the *Harivaṅśa*, was changed by her father's curse from one-half of the Gaṅgâ into the river which bears her name, and which was therefore also called Ardha-gaṅgâ, *i.e.*, half-gaṅgâ. K a r o u r a, the residence of the Chera king, was upon this river.

Dr. Burnell identified K h a b ê r i s with Kâvêrîpaṭṭam (*Ind. Ant.*, vol. VII, p. 40) which lies a little to the north of Tranquebar (Tallangambadi) at the mouth of the Pudu-Kâvêrî (New Kâvêrî).

S a b o u r a s:—This mart Yule refers doubtingly to Gudalur (Cuddalore) near the mouth of the S. Penn-âr River.

14. The A r o u a r n o i (Arvarnoi).

Pôdoukê, an emporium	130° 15′	14° 30′
Melangê, an emporium	131°	14° 20′
Mouth of the River Tyna.....	131° 40′	12° 45′

Kottis	132° 20′	12° 10′
Manarpha (or Manaliarpha, a mart)	133° 10′	12°

15. M a i s ô l i a.

Mouth of the River Maisôlos	134°	11° 40′
Kontakossyla, a mart	134° 30′	11° 40′
Koddoura	135°	11° 30′
Allosygnê, a mart	135° 40′	11° 20′
The point of departure (*aphetêrion*) for ships bound for Khrysê	136° 20′	—11°

The territory of the A r o u a r n o i (Arvarnoi) was permeated by the River Tyna, and extended northward to Maisôlia, the region watered by the River Maisôlos in the lower parts of its course. Opinions differ with regard to the identification of these two rivers, and consequently also of the places mentioned in connection with them. Some of the older commentators, followed by Yule, take the Tyna to be the Pinâka or Penn-âr River, and the Maisôlos the Kṛishṇâ. Lassen again, and recent writers generally, identify the Tyna with the Kṛishṇâ and the Maisôlos with the Gôdâvarî. To the former theory there is the objection that if the Gôdâvarî be not the Maisôlos, that most important of all the rivers on this coast is left unnoticed, and Lassen accordingly asks why should the small Penn-âr appear and the great Gôdâvarî be omitted. To this Yule rejoins, "We cannot say why; but it is a curious fact that in many maps of the 16th and 17th and even of the 18th century the Gôdâvarî continues to be omitted altogether. A beautiful

map in Valentijn (vol. V), shows Gôdâvarî only as a river of small moment, under a local name." He argues further that the name Tynna if applied to the Kṛishṇâ is unaccounted for. As identified with the Penn-âr or Pinâka, *TYNNA* is an easy error for *ΠΥΝΝΑ*.

P ô d o u k ê :—This mart is mentioned in the *Periplûs* along with Kamara and Sôpatma as ports to which merchants from Limyrikê and the north were wont to resort. According to Böhlen, Ritter and Benfey, it is Puduchchêri (Pondicherry). Lassen and Yule agree, however, in placing it at Pulikât, which is nearly two degrees further north.

In Yule's map M e l a n g ê is placed at Kṛishṇapatam, a little to the south of the North Penn-âr River, which as we have seen, he identifies with the Tyna. Its name closely approximates to that of the capital Malanga, and hence Cunningham, who takes the Maisôlos to be the Gôdâvarî, and who locates Malanga in the neighbourhood of Elûr, identifies Melangê with Bandar Malanka (near one of the Gôdâvarî mouths) which he assumes to have been so called from its being the port (*bandar*) with which the capital that lay in the interior communicated with the sea. See *Geog. of Anc. Ind.*, pp. 539-40.

M a n a r p h a (or Manaliarpha):—This mart lay at the mouth of a river which still preserves traces of its name, being called the Manâra. Kottis lay not very far to the north of it.

M a i s ô l i a is the name of the coast between the Kṛishṇâ and the Gôdâvarî, and onward thence to the neighbourhood of Paloura. It is the Masalia

of the *Periplûs* which describes it as the sea-board of a country extending far inland, and noted for the manufacture, in immense qnantities, of the finer kinds of cotton fabrics. The name is preserved in Masulipaṭṭam, which has been corrupted for the sake of a meaning into Machhlipatam, which means *fish-town*. The Metropolis called P i t y n d r a was seated in the interior.

K o n t a k o s s y l a transliterates, though not quite correctly, the Sanskrit Kaṇṭakasthala, '*place of thorns*.' In Yule's map it is placed inland near the Kṛishṇâ, in the neighbourhood of Koṇḍapalle, in which its name seems to be partly preserved.

K o d d o u r a has been identified with Gûdrû, a town near Masulipatam.

A l l o s y g n ê may perhaps be now represented by Koringa (Koranja) a port situated a little beyond Point Gôdâvarî. Its distance from the point next mentioned in the Tables may be roughly estimated at about 230 miles, but Ptolemy makes it to be only $\frac{2}{3}$ of a degree, and thus leaves undescribed an extensive section of the coast comprising the greater part of the sea-board of the Kalingai. A clue to the explanation of this error and omission is supplied by a passage in the *Periplûs*, which runs to the effect that ships proceeding beyond Maisôlia stood out from the shore and sailing right across a bay made a direct passage to the ports of Dêsarênê, *i.e.* Orissa. It may hence be inferred that navigators who came from a distance to trade in those seas would know little ór nothing of a coast which they were

careful to avoid, and that Ptolemy in consequence was not even so much as aware of its existence.

The point whence ships took their departure for Khrysê Yule places at the mouth of a little river called the Baroua (the Puacotta of Lindschoten) lying under Mt. Mahendra in lat. 18° 54′ N. This *aphetêrion*, he points out, was not a harbour as Lassen supposed, from which voyages to Khrysê were made, but the point of departure from which vessels bound thither struck off from the coast of India, while those bound for the marts of the Ganges renewed their coasting. The course of navigation here described continued to be followed till modern times, as Yule shows by a quotation from Valentijn's book on the Dutch East Indies (1727) under a notice of Bimlipatam :—" In the beginning of February, there used to ply . . . to Pegu, a little ship with such goods as were in demand, and which were taken on board at Masulipatam. . . . From that place it used to run along the coast up to 18° N. Lat., and then crossed sea-wards, so as to hit the land on the other side about 16°, and then, on an offshore wind, sailed very easily to the Peguan River of Syriang." (Syriam below Rangun).

16. In the Gangetic Gulf.

Paloura or Pakoura, a town	136° 40′	11° 20′
Nanigaina	136° 20′	12°
Katikardama	136° 20′	12° 40′
Kannagara	136° 30′	13° 30′
Mouth of the River Manada	137°	14°
Kottobara	137° 15′	14° 40′

Sippara	137° 40′	15° 30′
Mouth of the River Tyndis	138° 30′	16°
17. Mapoura	139°	16° 30′
Minagara	140°	17° 15′
Mouth of the Dôsarôn	141°	17° 40′
Kôkala	142°	18°
Mouth of the River Adamas	142° 40′	18°
Kôsamba or Kôsaba	143° 30′	18° 15′

Paloura:—Ptolemy, as we have seen, placed this town at the extremity of a great peninsula projecting to the south-east, which had no existence however, except in his own imagination. The following passage, quoted by Yule from Lindschoten, shows that the name of Paloura survived till modern times, and indicates at the same time where its site is to be looked for:—"From the river of Puacota to another called Paluor or Palura, a distance of 12 leagues, you run along the coast with a course from S. W. to E. Above this last river is a high mountain called Serra de Palura, the highest mountain on the coast. This river is in 19½°." The Palura River must be the river of Ganjâm, the latitude of which is at its mouth 19° 23′. Ptolemy fixes at Paloura the beginning of the Gangetic Gulf.

Nanigaina may perhaps, be placed at Purî, famous for the temple of Jagannâtha Katikardama. The first part of the name points to the identification of this place with Kaṭak, the capital of Orissa.

Kannagara:—There can be little doubt that we have here the Kanarak of modern times, called also the Black Pagoda.

Mouth of the M a n a d a :—Ptolemy enumerates four rivers which enter the Gulf between Kannagara and the western mouth of the Ganges, the Manada, the Tyndis, the Dôsarôn and the Adamas. These would seem to be identical respectively with the four great rivers belonging to this part of the coast which succeed each other in the following order:—The Mahânadî, the Brâhmaṇî, the Vaitaraṇî and the Suvarṇarêkhâ, and this is the mode of identification which Lassen has adopted. With regard to the Manada there can be no doubt that it is the Mahânadî, the great river of Orissa at the bifurcation of which Kaṭak the capital is situated. The name is a Sanskrit compound, meaning 'great river.' Yule differs from Lassen with regard to the other identifications, making the Tyndis one of the branches of the Mahânadî, the Dôsarôn,—the Brâhmaṇi the Adamas,—the Vaitaraṇî, and the Kambyson (which is Ptolemy's western mouth of the Ganges)—the Suvarṇarêkhâ.

The D ô s a r ô n is the river of the region inhabited by the Daśârnas, a people mentioned in the *Vishṇu Purâna* as belonging to the south-east of Madhya-dêśa in juxta-position to the Sabaras, or Suars. The word is supposed to be from *daśan* 'ten,' and ṛiṇa 'a fort,' and so to mean 'the ten forts.'

Adamas is a Greek word meaning *diamond*. The true Adamas, Yule observes, was in all probability the Sank branch of the Brâhmaṇî, from which diamonds were got in the days of Mogul splendour.

S i p p a r a :—The name is taken by Yule as

representing the Sanskrit *Śûrpâraka*. *Pâra* in Sanskrit means 'the further shore or opposite bank of a river.'

M i n a g a r a:—The same authority identifies this with Jaĵhpûr. In Arrowsmith's map I find, however, a small place marked, having a name almost identical with the Greek, Mungrapûr, situated at some distance from Jaĵhpûr and nearer the sea.

K ô s a m b a is placed by Yule at Balasôr, but by Lassen at the mouth of the Subanrêkhâ which, as we have seen, he identifies with the Adamas. There was a famous city of the same name, Kauśâmbî, in the north-west of India, on the River Jamnâ, which became the Pâṇḍû capital after Hastinâpura had been swept away by the Ganges, and which was noted as the shrine of the most sacred of all the statues of Buddha. It is mentioned in the *Râmâyaṅa*, the *Mahâvaṅśa*, and the *Mêghadûta* of Kâlidâsa. It may thus be reasonably concluded that the Kôsamba of Ptolemy was a seat of Buddhism established by propagandists of that faith who came from Kauśâmbî.

18. Mouths of the G a n g e s.

The Kambyson mouth, the most western	144° 30′	18° 15′
Poloura, a town	145°	18° 30′
The second mouth, called Mega	145° 45′	18° 30′
The third called Kambêri-khon	146° 30′	18° 40′
Tilogrammon, a town	147° 20′	18°

The fourth mouth, Pseudostomon	147° 40′	18° 30′
The fifth mouth, Antibolê	148° 30′	18° 15′

Ptolemy appears to have been the first writer who gave to the western world any definite information concerning that part of the Bengal Coast which receives the waters of the G a n g e s. His predecessors had indeed excelled him in the fulness and accuracy with which they had described the general course of the river, but they did not know, except in the very vaguest way, either where or how it entered the sea. Strabo, for instance, was not even aware that it had more than a single mouth. Ptolemy, on the other hand, mentions by name five of its mouths, and his estimate of the distance between the most western and the most eastern of these (4 degrees of latitude) is not very wide of the mark. Some traces also of his nomenclature are still to be found. It is difficult, however, to identify the mouths he has named with those now existing, as the Ganges, like the Indus, has shifted some of its channels, and otherwise altered the hydrography of its delta. Opinions differ regarding the western mouth, called the K a m b y s o n. One would naturally take it to be the Hughlî river, on which Calcutta stands, and V. de Saint-Martin accordingly adopts this identification. It is impossible to doubt, he says, that the Kambysum is the Hughlî river, which must have been at all times one of the principal outlets, as is proved historically by the mention of Tâmraliptâ, 600 years before our æra, as one of the most frequented ports of Eastern India. It would be possible enough, he continues, that

below Diamond Point, the principal channel, instead of passing as now in front of Kalpî remounted to the west in front of Tamluk (the ancient Tâmraliptâ) by the mouth of Tingorcally, and came thus to touch at a locality of which the actual name Nungabusan recalls that of Kambysum or Kambusum. Wilford and Yule, on the other hand, agree in identifying the Kambyson with the Subanrêkhâ river, which was formerly but erroneously supposed to be a branch of the Ganges, and they are thus free to take the Hughlî river as representing the second mouth called by Ptolemy the Mega, the Greek word for 'great.' Saint-Martin identifies this estuary with the River Matlâ to which in recent years an attempt was made to divert the commerce of Calcutta, in consequence of the dangers attending the navigation of the Hughlî. With regard to the K a m b ê r i k h o n, or third mouth, there is no difference of opinion. "It answers," says Saint-Martin, "to the Barabaṅgâ, a still important estuary, which receives the river of Kobbadak (or rather Kobbarak), which traverses the whole extent of the delta. The *Kshêtra Samâsa*, a modern treatise of Sanskrit Geography, which Wilford has often quoted in his Memoir on the Ancient Geography of the Gangetic basin, calls this river Koumâraka. Here the Kambêrikhon of the Greek navigators is easily recognized." The fourth mouth was called P s e u d o s t o m o n, that is, 'false mouth,' because it lay concealed behind numerous islands, and was often mistaken for the easternmost mouth of the Ganges. This Ptolemy calls A n t i b o l ê, a name which has not yet been explained. It

is the Ḍhakka or old Ganges river, and seems to have been the limit of India and the point from which measurements and distances relating to countries in India were frequently made.

In connexion with the river-mouths Ptolemy mentions two towns, Poloura and Tilogrammon. The former is placed in Yule's map at Jelasur, near the Subanrêkhâ, and the latter at Jesor. Its name seems to be compounded of the two Sanskrit words *tîla*, '*sesamum*,' and *grâma*, '*a village or township*.'

Ptolemy having thus described the whole sea-coast of India, from the mouths of the Indus to those of the Ganges, gives next a list of its mountain ranges, together with figures of Latitude and Longitude, showing the limits of the length of each range as well as the direction.

19. The mountains belonging to Intra-gangetic India are named as follows:—

The Apokopa, called *Poinai Theôn*, which extend from long. 116° to 124° and from lat. 23° at their western limit to 26° at the eastern.

20. Mount Sardônyx, in which is found the precious stone of the same name, and whose middle point is in long. 117° and lat. 21°.

21. Mount Ouïndion (Vindion) which extends from 126° to 135°, and preserves from its western to its eastern limit a uniform latitude of 27°.

Ptolemy enumerates seven of these, probably following some native list framed in accordance with the native idea that seven principal mountains existed in each division of a continent. A

Paurâṅik list gives us the names of the seven which pertained to India, Mahêndra, Malaya, Sahya, Śuktimat, Riksha, Vindhya and Pâripâtra or Pâriyâtra. This can hardly be the list which Ptolemy used, as only two of his names appear in it, Ouxenton (—) Ṛiksha, and Ouindion (—) Vindhya. As his views of the configuration of India were so wide of the mark, his mountain ranges are of course hopelessly out of position, and the latitudes and longitudes assigned to them in the tables afford no clue to their identification. Some help however towards this, as Yule points out, lies in the river-sources ascribed to each, which were almost certainly copied from native lists, in which notices of that particular are often to be found.

The A p o k o p a, or '*punishment*' of the '*gods*':—There is a consensus of the authorities in referring the range thus named to the Aravali mountains. Mount Arbuda (Abu) which is by far the most conspicuous summit, is one of the sacred hills of India. It was mentioned by Megasthenes in a passage which has been preserved by Pliny (N.H. lib. VI, c. xxi) who calls it Mons Capitalia, *i.e.* the 'Mount of Capital Punishment,' a name which has an obvious relation to the by-name which Ptolemy gives it, 'the punishment of the gods.' The word *apokopa* is of Greek origin, and means primarily 'what has been cut off,' and is therefore used to denote 'a cleft,' 'a cliff,' 'a steep hill.' It occurs in the *Periplûs* (sec. 15) where it designates a range of precipitous hills running along the coast of Azania, *i.e.* of Ajan in Africa. Its Sanskrit equivalent may have been given as a name to Mount Arbuda because of its having

been at some time rent by an earthquake. In point of fact the *Mahâbhârata* has preserved a tradition to the effect that a cleft (*chhidra*) had here been made in the earth. Such an alarming phenomenon as the cleaving of a mountain by an earthquake would naturally in superstitious times be ascribed to the anger of the gods, bent on punishing thereby some heinous crime. (See Lassen's *Ind. Alt.* vol. III, pp. 121-2.)

Mount Sardônyx is a short range, a branch of the Vindhya, now called Sâtpura, lying between the Narmadâ and the Tâptî: it is mentioned by Ktêsias (frag. 8) under the name of Mount Sardous. It has mines of the carnelian stone, of which the sardian is a species. The *Periplûs* (sec. 49) notices that onyx-stones were imported into Barygaza from the interior of the country, and that they were also among the articles which it exported.

Mount Ouindion:—This is a correct transliteration of *Vindhya*, the native name of the extensive range which connects the northern extremities of the Western and Eastern Ghâṭs, and which separates Hindûstân proper—the Madhya-dêśa or middle region, regarded as the sacred land of the Hindûs—from the Dekhan. Ptolemy, as Lassen remarks (*Ind. Alt.* vol. III, p. 120), is the only geographer of classical antiquity in whose writings the indigenous name of this far-spread range is to be found. His Vindion however does not embrace the whole of the Vindhya system, but only the portion which lies to the west of the sources of the Sôṇ. Sanskrit writers speak of the Vindhyas as a family of mountains. They

extended from Baroda to Mirzapur, and were continued thence to Chunar.

22. Bêttigô, which extends from 123° to 130°, and whose western limit is in lat. 21° and its eastern in 20°.

23. Adeisathron, whose middle point is in long. 132° and in lat. 23°.

24. Ouxenton, which extends from 136° to 143°, and whose western limit is in lat. 22° and its eastern in 24°.

25. The Oroudian Mountains, which extend from 138° to 133°, and whose eastern limit is in 18° lat. and its western 16°.

Mount Bêttigô:—As the rivers which have their sources in this range—the Pseudostomos, the Baris, and the Sôlên or Tâmraparṇî, all belong to South Malabar, there can be no doubt that Bêttigô denotes the southern portion of the Western Ghâṭs extending from the Koimbatur gap to Cape Comorin—called Malaya in the Paurâṇik list already quoted. One of the summits of this range, famous in Indian mythology as the abode of the Ṛishi Agastya, bears the name in Tamiḻ of Podigei, or as it is pronounced Pothigei. It is visible from the mouth of the Tâmraparṇî, which has its sources in it, and from Kolkhoi, and the Greeks who visited those parts, and had the mountain pointed out to them would no doubt apply the name by which they heard it called to the whole range connected with it. (See Caldwell's *Dravid. Gram.* Introd. p. 101.)

Adeisathron:—If we take Ptolemy's figures as our guide here, we must identify this range with the chain of hills which Lassen describes in the following passage:—"Of the mountain system of the Dekhan Ptolemy had formed an erroneous conception, since he represented the chain of the Western Ghâṭs as protruded into the interior of the country, instead of lying near to the western coast with which it runs parallel, and he was misled thereby into shortening the courses of the rivers which rise in the Western Ghâṭs. The chain which he calls Adeisathron begins in the neighbourhood of Nâgpur and stretches southward to the east of the rivers Wain + Gaṅgâ and Praṇîtâ, separates the Gôdâvarî from the Kṛishṇâ, and comes to an end at the sources of the Kâvêrî. This view of his meaning is confirmed by the fact that he locates the two cities Baithana or Pratishṭhâna which lies to the east of the Western Ghâṭs, on the Gôdâvarî, and Tagara both to the west of Adeisathron. He was led into this misrepresentation partly through the incompleteness and insufficiency of the accounts which he used, and partly through the circumstance that the Eastern Ghâṭ does not consist of a single chain, but of several parallel chains, and that to the south of the sources of the Kâvêrî the Eastern Ghâṭ is connected with the Western Ghâṭ through the Nilgiri Mountains. The name Adeisathron, one sees, can only refer to the West Ghâṭ in which the Kâvêrî rises." (*Ind. Alt.* vol. III, pp. 162-3.) Yule explains the source of Ptolemy's error thus: "No doubt his Indian lists showed him Kâvêrî rising in Sahyâdri (as does Wilford's list from the

Brahmanda Pârâṇa, *As. Res.* vol. VIII, p. 335f.). He had no real clue to the locality of the Sahyâdri, but found what he took for the same name (*Adisathra*) applied to a city in the heart of India, and there he located the range." Adeisathron must therefore be taken to denote properly that section of the Western Ghâts which is immediately to the north of the Koimbatur gap, as it is there the Kâvêrî rises. The origin of the name Adeisathron will be afterwards pointed out.

Ouxenton designates the Eastern continuation of the Vindhyas. All the authorities are at one in referring it to the mountainous regions south of the Sôṇ, included in Chhutia Nâgpûr, Râmgarh, Sirgujâ, &c. Ptolemy places its western extremity at the distance of one degree from the eastern extremity of the Vindhyas. The rivers which have their sources in the range are the Tyndis, the Dôsarôn, the Adamas and an unnamed tributary of the Ganges. The name itself represents the Sanskrit Ṛikshavant, which however did not designate the Eastern Vindhyas, but a large district of the central. This difference in the application of the names need not invalidate the supposition of their identity. The authors whom Ptolemy consulted may have misled him by some inaccuracy in their statements, or the Hindûs themselves may have intended the name of Ṛikshavant to include localities further eastward than those which it primarily denoted. *Ṛiksha* means 'a bear,' and is no doubt connected with the Greek word of the same meaning, *arktos*.

The Oroudian Mountains:—"This we take,"

says Yule, "to be the Vaidûrya just mentioned, as the northern section of the Western Ghâṭs, though Ptolemy has entirely misconceived its position. We conceive that he found in the Indian lists that the great rivers of the eastern or Maesolian Coast rose in the Vaidûrya, and having no other clue he places the Orûdia (which seems to be a mere metathesis of Odûrya for Vaidûrya) near and parallel to that coast. Hence Lassen and others (all, as far as is known) identify these Oroudian Mountains with those that actually exist above Kaliṅga. This corresponds better, no doubt, with the position which Ptolemy has assigned. But it is not our business to map Ptolemy's errors; he has done that for himself; we have to show the real meaning and application of the names which he used, whatever false views he may have had about them."

26. The rivers which flow from Mount Imaös into the Indus are arranged as follows:—

Sources of the River Kôa.....	120°	37°
Sources of the River Souastos	122° 30′	36°
Sources of the River Indus	125°	37°
Sources of the River Bidaspês	127° 30′	36° 40′
Sources of the River Sandabal....	129°	36°
Sources of the River Adris or Rouadis	130°	37°
Sources of the River Bidasis	131°	35° 30′

Regarding the origin and meaning of the name Indus, Max Müller (*India, what it can teach us*) says: "In the *Vêdas* we have a number of names of the rivers of India as they were known to one single

poet, say about 1000 B.C. We then hear nothing of India till we come to the days of Alexander, and when we look at the names of the Indian rivers represented by Alexander's companions in India, we recognize without much difficulty nearly all of the old Vedic names. In this respect the names of rivers have a great advantage over the names of towns in India. I do not wonder so much at the names of the Indus and the Ganges being the same. The Indus was known to early traders, whether by sea or land. Skylax sailed from the country of the Paktys, *i.e.* the Pushtus, as the Afghans still call themselves, down to the mouth of the Indus. That was under Darius Hystaspês (B.C. 521-486). Even before that time India and the Indians were known by their name, which was derived from Sindhu, the name of their frontier river. The neighbouring tribes who spoke Iranic languages all pronounced, like the Persian, the *s* as an *h* (Pliny, lib. VI, c.xx, 7) '*Indus incolis Sindus appellatus.*' Thus *Sindhu* became *Hindhu* (*Hidhu*) and as *h's* were dropped, even at that early time, *Hindhu* became *Indu*. Thus the river was called Indus, the people Indoi by the Greeks, who first heard of India from the Persians. *Sindhu* probably meant originally the *divider*, *keeper* and *defender*, from *sidh* to *keep off*. No more telling name could have been given to a broad river, which guarded peaceful settlers both against the inroads of hostile tribes and the attacks of wild animals. . . . Though Sindhu was used as an appellative noun for river in general, it remained throughout the whole history of India, the name of its powerful guardian river,

the Indus." For a full discussion of the origin of the name I may refer the reader to Benfey's *Indien*, pp. 1—2, in the *Encyclopædia* of Ersch and Grüber.

The Indus being subject to periodic inundations, more or less violent, has from time to time undergone considerable changes. As has been already indicated it not unfrequently shifts the channels by which it enters the sea, and in the upper part of its course it would seem to be scarcely less capricious. Thus while at the time of the Makedonian invasion it bifurcated above Arôr, the capital of the Sogdi, to run for about the distance of 2 degrees in two beds which enclosed between them the large island called by Pliny (lib. VI, c. xx, 23) Prasiakê, the Prârjuna of the inscription on the Allâhâbâd column, it now runs at that part in a single stream, having forsaken the eastern bed, and left thereby the once flourshing country through which it flowed a complete desert.

In his description of the Indus, Ptolemy has fallen into error on some important points. In the first place, he represents it as rising among the mountains of the country of the Daradrae to the east of the Paropanisos, and as flowing from its sources in a southward direction. Its true birthplace is, however, in a much more southern latitude, viz., in Tibet, near the sources of the Satlaj, on the north side of Mount Kailâsa, famous in Indian mythology as the dwelling-place of Kuvêra and as the paradise of Śiva, and its initial direction is towards the north-west, till it approaches the frontiers of Badakshân, where it turns sharply southward. Ptolemy does not stand alone in making

this mistake, for Arrian places the sources in the lower spurs of the Paropanisos, and he is here at one with Mela (lib. III, c. vii, 6), Strabo (lib. XV, c. ii, 8), Curtius (lib. VIII, c. ix, 3) and other ancient writers. In fact, it was not ascertained until modern times whence the Indus actually came. His next error has reference to the length of the Indus valley as measured from the mouth of the Indus to its point of junction with the Kâbul river. This he makes to be 11 degrees, while in point of fact it is somewhat less than 10. This error is, however, trivial as compared with the next by which the junction of the Indus with the united stream of the Panjâb rivers is made to take place at the distance of only one degree below its junction with the Kâbul river, instead of at the distance of six degrees or halfway between the upper junction and the sea. This egregious error not only vitiates the whole of his delineation of the river system of the Panjâb, but as it exaggerates by more than 300 miles the distance between the lower junction and the sea, it obscures and confuses all his geography of the Indus valley, and so dislocates the positions named in his tables, that they can only in a few exceptional cases be identified.[22]

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22 "It is hard enough," says Major-General Haig, "to have to contend with the vagueness, inconsistencies and contradictions of the old writers; but these are as nothing compared with the obstacles which the physical characteristics of the country itself oppose to the enquirer. For ages the Indus has been pushing its bed across the valley from east to west, generally by the gradual process of erosion, which effectually wipes out every trace of town and village on its banks; but at times also by a more or less sudden shifting of its waters into

All the large tributaries of the Indus, with the exception of the Kâbul river, join it on its left or eastern side. Their number is stated by Strabo (lib. XV, c. i, 33) and by Arrian (lib. V, c. vi) to be 15, but by Pliny (lib. VI, c. xx, 23) to be 19. The most of them are mentioned in one of the hymns of the *Ṛig Veda* (X, 75) of which the following passages are the most pertinent to our subject:—

1. "Each set of seven [*streams*] has followed a threefold course. The Sindhu surpasses the other rivers in impetuosity.

2. Varuṇa hollowed out the channels of thy course, O Sindhu, when thou didst rush to thy contests. Thou flowest from [*the heights of*] the earth, over a downward slope, when thou leadest the van of those streams.

4. To thee, O Sindhu, the [*other streams*] rush . . . Like a warrior king [*in the centre of his army*] thou leadest the two wings of thy host when thou strugglest forward to the van of these torrents.

5. Receive favourably this my hymn, O Gaṅgâ, Yamunâ, Sarasvatî, Śutudrî, Parashṇi; hear, O Marudvṛidhâ, with the Asiknî, and Vitastâ, and thou Arjîkîyâ with the Sushômâ.

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entirely new channels, leaving large tracts of country to go to waste, and forcing the inhabitants of many a populous place to abandon their old homes, and follow the river in search of new settlements. . . . Perhaps the retiring stream will leave behind it vast quantities or drift-sand which is swept by the high winds over the surrounding country . . . where the explorer may search in vain for any record of the past. I have had, as an enquirer, experience of the difficulties here described." (*J. R. A. S.* N. S. vol. XVI, p. 281).

6. Unite first in thy course with the Ṛishṭâmâ, the Sasartû, the Rasâ and the Śvêtî; thou meetest the Gomatî, and the Krumu, with the Kubhâ, and the Mehatnû, and with them are borne onward as on the same car." (See *Journ. R. A. S.*, N. S., Vol. XV, pp. 359-60).

As Ptolemy makes the Kôa join the Indus, it must be identified with the Kâbul river, the only large affluent which the Indus receives from the west. Other classical writers call it the Kôphên or Kôphês, in accordance with its Sanskrit name the Kubhâ. Ptolemy's name, it must however be noted, is not applicable to the Kâbul river throughout its whole course, but only after it has been joined by the River Kâmah, otherwise called the Kunâr. This river, which is inferior neither in size nor in length to the arm which comes from Kâbul, is regarded as the main stream by the natives of the country, who call the course of the united streams either the Kâmah or the Kunâr indifferently, as far as the entrance into the plain of Peshâwar. The Kâmah has its sources high up in the north at the foot of the plateau of Pâmîr, not far from the sources of the Oxus, and this suits Ptolemy's description of the Kôa as a river which has its sources in the eastern extremity of Paropanisos, and which joins the Indus after receiving the Souastos or the river of Swât. Kôa is very probably a curtailed form of the name. The Persians appear to have called it the Khoaspês, that being the name of the river on which Susa, their capital city, stood. Under this name it is mentioned by Aristotle (*Meteorolog.* lib. I, c. xiii) who lived long enough to enter in his

later writings some of the new knowledge which the expedition of his illustrious pupil had opened up regarding Eastern Countries. It is mentioned also by Strabo (lib. XV, c. i, 26) who followed here the authority of Aristoboulos, one of the companions and one of the historians of the expedition of Alexander, and by Curtius (lib. VIII, c. x), Strabo *l.c.* states that it joins the Kôphês near Plemyrion, after passing by another city, Gorys, in its course through Bandobênê and Gandaritis. The Kôa of Ptolemy is not to be confounded with the Khôês of Arrian (lib. IV, c. xxiii, 2), which must be identified with a river joining the Kôphês higher up its course, viz. that which is formed by the junction of the Alishang and the Alingar. The Euaspla of the latter writer (lib. IV, c. xxiv, 1) is probably only an altered form of Khoaspês.

The identification of the Kôphês and its numerous affluents has been a subject that has much exercised the pens of the learned. They are now unanimous in taking the Kôphês to be the Kâbul river[23] but there are still some important points on which they differ. In the foregoing notice I have adopted as perferable the views of Saint-Martin (*Étude*, pp. 26–34): *Conf.* Lassen, *Ind. Alt.* vol. III, pp. 127-8; Wilson, *Ariana Antiqua*, pp. 138–188. Benfey's *Indien*, pp. 44–46, Cunningham, *Geog. of Anc. India*, pp. 37, 38.

S o u a s t o s:—All the authorities are at one in identifying the Souastos with the Swât river—the principal tributary of the Landai or river of Paũjkora (the Gaurî of Sanskrit), which is the

[23] Rennell identified it with the Gomul and D'Anville with the Argandâb.

last of the great affluents that the Kâbul river receives from the east before it falls into the Indus. The Souastos, though a small stream, is yet of old renown, being the Śvêtî of the Vedic hymn already quoted, and the Suvâstu of the *Mahâbhârata* (VI, ix, 333), where it is mentioned in conjunction with the Gaurî. Its name figures also in the list of Indian rivers which Arrian (*Indika*, sec. 4) has preserved from the lost work of Megasthenês. Here it is mentioned in conjunction with the Malamantos and the Garoia, which latter is of course the Gaurî. Arrian thus makes the Souastos and the Gouraios to be different rivers, but in another passage of his works (*Anab.* lib. IV, c. xxv) he seems to have fallen into the mistake of making them identical. It is surprising, as Lassen has remarked, that Ptolemy should notice the Souastos, and yet say nothing about the Garoia, especially as he mentions the district of Goryaia, which is called after it, and as he must have known of its existence from the historians of Alexander. He has also, it may be noted, placed the sources of the Souastos too far north.

The five great rivers which watered the region of the Panjâb bear the following names in Ptolemy: Bidaspês, Sandabal, Adris or Rhonadis, Bibasis and Zaradros. This region in early times was called the country of the seven rivers—Sapta Sindhu, a name which, as Sir H. Rawlinson has pointed out, belonged primarily to the seven head streams of the Oxus. As there were only five large streams in the locality in India to which the name was applied, the number was made up to seven by adding smaller affluents or lower branches of combined

streams, to which new names were given. The Vedic Âryans, however, as Mr. Thomas remarks, could never satisfactorily make up the sacred seven without the aid of the comparatively insignificant Sarasvatî, a river which no longer exists. These rivers are notably erratic, having more than once changed their bed since Vedic times.

B i d a s p ê s :—This is now the Jhelam or river of Behat, the most western of the five rivers. It drains the whole of the valley of Kaśmîr, and empties into the Akesinês or Chenâb. Ptolemy, however, calls their united stream the Bidaspês. By the natives of Kaśmîr it is called the Bedasta, which is but a slight altered form of its Sanskrit name the Vitastâ, meaning 'wide-spread.' The classical writers, with the sole exception of our author, call it the Hydaspês, which is not so close to the original as his Bidaspês. It was on the left bank of this river that Alexander defeated Pôros and built (on the battle-field) the city of Nikaia in commemoration of his victory.

S a n d a b a l is an evident mistake of the copyist for Sandabaga. The word in this corrected form is a close transliteration of Chandrabhâgâ (*lunae portio*), one of the Sanskrit names of the River Chenâb In the Vedic hymn which has been quoted it is called the Asiknî, 'dark-coloured,' whence the name given to it by the Greeks in Alexander's time, the Akesinês. It is said that the followers of the great conqueror discerned an evil omen in the name of Chandrabhâgâ on account of its near similarity to their own word *Androphagos* or *Alexandrophagos*, 'devourer of Alexander' and hence

preferred calling it by the more ancient of its two names. It is the largest of all the streams of the Pañchanada. Vigne says that Chandrabhâgâ is the name of a small lake from which the river issues. Pliny has distorted the form Chandabaga into Chantabra or Cantaba (lib. VI, c. xx). According to the historians of Alexander the confluence of this river with the Hydaspês produced dangerous rapids, with prodigious eddies and loud roaring waves, but according to Burnes their accounts are greatly exaggerated. In Alexander's time the Akesinês joined the Indus near Uchh, but the point of junction is now much lower down.

The A d r i s or R h o u a d i s is the Râvî, a confluent of the Akesinês, but according to Ptolemy of the Bidaspês. The name Râvî is an abridged form of the Sanskrit Airâvatî. It is called by Arrian (*Anab.* lib. VI, c. viii), the Hydraôtês, and by Strabo (lib. XV, c. i, 21) the Hyarôtis. Arrian (*Indik.* sec. 4) assigns to it three tributaries—the Hyphasis, the Saranges and Neudros. This is not quite correct, as the Hyphasis joins the Akesinês below the junction of the Hydraôtês.

The B i b a s i s is the river now called the Beiäs, the Vipâśâ of Sanskrit. This word "Vipâśâ" means 'uncorded,' and the river is said to have been so called because it *destroyed the cord* with which the sage Vasishṭha had intended to hang himself. It is called the Hyphasis by Arrian (*Anab.* lib. VI, c. viii), and Diodôros (lib. XVII, c. xciii), the Hypasis by Pliny (lib. VII, c. xvii, 20) and Curtius (lib. IX, c. i), and the Hypanis by Strabo (lib. XV, c. i, 17) and some other writers.

It falls into the Śatadru. It was the river which marked the limit of Alexander's advance into India.

27. Sources of the River Zaradros	132°	36°
Confluence of the Kôa and Indus	124°	31°
Confluence of the Kôa and Souastos	122° 30′	31° 40′
Confluence of the Zaradros and Indus	124°	30°
Confluence of the Zaradros and Bidaspês	125°	30°
Confluence of the Zaradros and Bibasis	131°	34°
Confluence of the Bidaspês and Adris	126° 30′	31° 30′
Confluence of the Bidaspês and Sandabal	126° 40′	32° 40′

The Zaradros is the Satlaj, the most easterly of the five rivers. It is called in Sanskrit the Śatadru, *i.e.*, *flowing in a hundred* (*branches*). Pliny (lib. VI, c. xvii) calls it the Hesydrus, Zadrades is another reading of the name in Ptolemy. The Satlaj, before joining the Indus, receives the Chenâb, and so all the waters of the Pañchanada.

With regard to the nomenclature and relative importance of the rivers of the Panjâb the following remarks of V. de Saint-Martin may be cited :—

"As regards the Hyphasis, or more correctly the Hypasis, the extended application of this name till the stream approaches the Indus, is

contrary to the notions which we draw from Sanskrit sources, according to which the Vipâśâ loses its name in the Śatadru (Satlaj), a river which is otherwise of greater importance than the Vipâśâ. Nevertheless the assertion of our author by itself points to a local notion which is confirmed by a passage in the chronicles of Sindh, where the name of the Beiah which is the form of the Sanskrit Vipâśâ in Musalmân authors and in actual use, is equally applied to the lower course of the Satlaj till it unites with the Chenâb not far from the Indus. Arrian, more exact here, or at least more circumstantial than Strabo and the other geographers, informs us that of all the group of the Indus affluents the Akesinês was the most considerable. It was the Akesinês which carried to the Indus the combined waters of the Hydaspês of the Hydraôtês and of the Hyphasis, and each of these streams lost its name in uniting with the Akesinês (Arr. *Anab.* lib. VI, c. v). This view of the general hydrography of the Panjâb is in entire agreement with facts, and with the actual nomenclature. It is correctly recognized that the Chenâb is in effect the most considerable stream of the Panjâb, and its name successively absorbs the names of the Jhelam, the Râvi, and the Gharra or lower Satlaj, before its junction with the Indus opposite Mittankôṭ. Ptolemy here differs from Arrian and the current ideas on the subject. With him it is not the Akesinês (or, as he calls it, the Sandabala for Sandabaga) which carries to the Indus the waters of the Panjâb. It is the Bidaspês (Vitastâ). Ptolemy departs again in another point from the nomen-

clature of the historians who preceded him in applying to the Gharra or lower Satlaj the name of Zaradros, and not, as did Arrian that of Hypasis. Zadadros is the Śutudrî or Śatadru of the Sanskrit nomenclature, a name which common usage since the Musalmân ascendancy has strangely disfigured into Satlaj. No mention is made of this river in the memoirs relating to the expedition of Alexander, and Megasthenês, it would appear, was the first who made its existence known. The application moreover of the two names of Zadadros and Bibasis to the united current of the Śatadru and the Vipâśâ is justified by the usage equally variable of the natives along the banks, while in the ancient Sanskrit writings the Śatadru goes, as in Ptolemy, to join the Indus. It may be added that certain particularities in the texts of Arrian and Ptolemy suggest the idea that formerly several arms of the Hyphasis existed which went to join, it may be, the Hydraôtês, or, it may be, the lower Akesinês above the principal confluent of the Hyphasis, an idea which the actual examination of the locality appears to confirm. This point merits attention because the obscurities or apparent contradictions in the text of the two authors would here find an easy explanation" (pp. 129–131, also pp. 396–402).

Junction of the Kôa and Indus:—Ptolemy fixes the point of junction in latitude 31°, but the real latitude is 33° 54′ Here the Indus is 872 miles distant from its source, and 942 miles from the sea. The confluence takes place amidst numerous rocks and is therefore turbulent and attended with great noise.

Junction of the Zaradros and Indus:—Ptolemy fixes this great junction in latitude 30°, the real latitude being however 28° 55′. It takes place about 3 miles below Miṭankôt, at a distance of about 490 miles below the junction with the Kâbul River.

Divarication of the Indus towards Mt. Vindion:—The Indus below its junction with the Kâbul river frequently throws out branches (*e.g.* the Nara) which join it again before reaching the sea, and to such branches Ptolemy gives the name of ἐκτροπαί "It is doubtful," Saint-Martin observes, "whether Ptolemy had formed quite a clear idea of this configuration of the valley, and had always distinguished properly the affluents from the branches. Thus one does not quite precisely see what he means by the expression which he frequently employs ἡ πηγὴ τῆς ἐκτροπῆς. What he designates thereby must be undoubtedly the streams or currents which descend from the lateral region, and which come to lose themselves in the branches of the river. But the expression, which is familiar to him, is not the less ambiguous and altogether improper"—(p. 235 n.). The branch here mentioned, Lassen (*Ind. Alt.* vol. III, pp. 121, 129) takes to be the Lavaṇî river. "Ptolemy," he says, "in contradiction to fact makes a tributary flow to it from the Vindhya Mountains. His error is without doubt occasioned by this, that the Lavaṇî river, which has its source in the Arâvalî chain falls into the salt lake, the Rin or Iriṇa, into which also the eastern arm of the Indus discharges."

Divarication of the Indus into Arakhôsia:—

Lassen (vol. III, p. 128), takes this to be the Gomal rather than the Korum river. These rivers are both mentioned in the Vedic hymn, where the former appears as the Gômati and the latter as the Krumu.

Branch of the K ô a towards the P a r o p a n i s a d a i:—This is probably the upper Kôphên, which joins the Kôa (Kunâr river) from Kâbul.

Divarication of the I n d u s towards the A r b i t a mountains:—Between the Lower Indus and the river called anciently the Arabis or Arbis, was located a tribe of Indian origin called variously the Arabii, the Arbies, the Arabitae, the Ambritae and the Arbiti. There can be no doubt therefore that by the Arbita Mountains Ptolemy designates the range of hills in the territory of that tribe, now called the Hâla Mountains. Towards the northern extremity of this range the Indus receives a tributary called the Gandava, and this we may take to be what Ptolemy calls the divarication of the Indus towards the range. It may perhaps, however, be the Western Nara that is indicated.

Divarication of the I n d u s into the P a r o p a n i s a d a i:—To judge from the figures in the table this would appear to be a tributary of the Indus joining it from the west a little above its junction with the Kôa or Kâbul river. There is, however, no stream, even of the least note, answering to the description.

28. Divarication (ἐκτροπῆ) from the Indus running towards Mt. Ouindion ..123° 29° 30′
The source of (tributary joining) the Divarication .....127° 27°

Divarication of the Indus towards Arakhôsia.....	121° 30′	27° 30′
Divarication of the Kôa towards the Paropanisadai	121° 30′	33°
The source of (tributary joining) the Divarication.....	115°	24° 30′
Divarication of the Indus towards the Arbita Mountains	117°	25° 10′
Divarication of the Indus towards the Paropanisadai	124° 30′	31° 20′
Divarication of the Indus into the Sagapa mouth	113° 40′	23° 15′
From the Sagapa into the Indus	111°	21° 30′
Divarication of the Indus into the Khrysoun (or Golden) mouth	112° 30′	22°
Divarication of the Indus into the Khariphon mouth	113° 30′	22° 20′
From the Khariphon to the Sapara	112° 30′	21° 45′
Divarication of the same River Khariphon into the Sabalaessa mouth	113°	21° 20′
Divarication from the River Khariphon into the Lônibare mouth	113° 20′	21° 40′

29. Of the streams which join the Gangês the order is this :—

Sources of the River Diamouna	134° 30′	36°

Sources of the Ganges itself	136°	37°
Sources of the River Sarabos	140°	36°
Junction of the Diamouna and Ganges	136°	34°
Junction of the Sarabos and Ganges	136° 30′	32° 30′

Ptolemy's description of the Ganges is very meagre as compared with his description of the Indus. He mentions by name only 3 of its affluents, although Arrian (quoting from Megasthenês) enumerates no fewer than 17, and Pliny 19. The latitude of its source, Gangotri, which is in the territory of Garhwal, is 30° 54′, or more than 6 degrees further south than its position as given in the table. The name of the river, the Gaṅgâ, is supposed to be from a root *gam*, 'to go,' reduplicated, and therefore to mean the 'Go—go.' The tributaries mentioned by Arrian are these: the Kaïnas, Erannoboas, Kossoanos, Sônos, Sittokatis, Solomatis, Kondokhates Sambos, Magon, Agoranis, Omalis, Kommenases, Kakouthis, Andomatis, Amystis, Oxymagis and the Errhenysis. The two added by Pliny are the Prinas and Jomanes. Regarding these names the following remarks may be quoted from Yule:—

"Among rivers, some of the most difficult names are in the list which Pliny and Arrian have taken from Megasthenês, of affluents of the Gangês. This list was got apparently at Palibothra (Patna), and if streams in the vicinity of that city occupy an undue space in the list, this is natural. Thus Magona and Errhenysis,—Mohana and Nirañjana, join to form the river flowing past Gayâ, famous

in Buddhist legend under the second name. The navigable Prinas or Pinnas is perhaps Puṇyâ, now Pûnpûn, one of the same cluster. Sonus instead of being a duplicate of Erannoboas, may be a branch of the Gayâ river, still called Soṇâ. Andomatis flowing from the Madiandini, *i.e.*, "Meridionales" is perhaps the Andhela, one of the names of the Chandan river of Bhâgalpûr. Kainas, navigable, is not likely to be the Ken of Bundêlkhand, the old form of which is Karṇavatî, but more probably the Kayâna or Kohâna of Gorakhpûr. It is now a tributary of the lower Ghâgrâ, but the lower course of that river has shifted much, and the map suggests that both the Rapti (Solomatis of Lassen) and Kayâna may have entered the Ganges directly." For the identification of the other rivers in the list see my article in the *Indian Antiquary*, vol. V, p. **331.**

D i a m o u n a :—In this it is easy to recognize the Yamunâ, the river which after passing Dehli, Maṭhurâ, Âgrâ, and other places, joins the Ganges, of which it is the largest affluent at Allâhâbâd. It rises from hot springs amid Himâlayan snows, not far westward from the sources of the Ganges. Arrian singularly enough has omitted it from his list of the Ganges affluents, but it is no doubt the river which he subsequently mentions as the J o b a r e s and which flows, he says, through the country of the Sourasenoi, an Indian tribe possessing two large cities, Methora and Kleisobara (Kṛishṇapura ?) Pliny (lib. VI, c. xix) calls it the Jomanes, and states that it flows into the Ganges through the Palibothri, between the towns of Methora and Chrysobara (Kṛishṇapura ?) The

Ganges at its junction with the Jamnâ and a third but imaginary river called the Sarasvatî, which is supposed to join it underground is called the Trivêṇî, *i.e.*, 'triple plait' from the intermingling of the three streams.

Sarabos:—This is the great river of Kôśala, that is now called the Sarayu or Sarju, and also the Gharghara or Ghogra. It rises in the Himâlayas, a little to the north-east of the sources of the Ganges, and joins that river on its left side in latitude 25° 46′, a little above the junction of the Sôṇ with their united stream. Cunningham regards the Solomatis mentioned in Arrian's list of the tributaries of the Ganges as being the Sarayu under a different name, but Lassen takes it to be the Rapti, a large affluent of the same river from Gôrakhpur. The name, he thinks, is a transliteration or rather abbreviation of Śarâvatî, the name of a city of Kôśala mentioned by Kalidâsa. The river on which the city stood is nowhere mentioned, but its name was in all probability the same as that of the city (*Ind. Alt.*, vol. II, p. 671).

Mouth of the River Sôa:—This river can be no other than the Sôṇ (the Sônos of Arrian's list) which falls into the Ganges about 16 miles above Patna in lat. 25° 37′. It rises in Gôndwana in the territory of Nâgpur, on the elevated table-land of Amarakaṅṭaka, about 4 or 5 miles east of the source of the Narmadâ. It would appear that in former times it joined the Ganges in the immediate neighbourhood of Patna, the modern representative of the Palibothra or Palimbothra of the classical writers. The lat. of the source is 22° 41′; in Ptolemy 28°.

30. Divarication from the Ganges towards the Ouindion range to the mouth of the River Sôa .....136° 10′ 31° 30′
The sources of the river.....131° 28°
Divarication of the Ganges
towards the Ouxenton range....142° 28°
The sources of the divarication....137° 23°
Divarication from the Ganges
into the Kambyson Mouth ....146° 22°
Divarication from the Ganges
into the Pseudostomos.....146° 30′ 20°
Divarication from the Ganges into the Antibolê Mouth....146° 30′ 21°
Divarication from the Kambyson River into the Mega
Mouth .....145° 20°
Divarication from the Mega
Mouth into the Kambêrikhon Mouth.....145° 30′ 19° 30′

The divarication towards the Ouxenton range :—By this unnamed river, as Lassen has pointed out (*Ind. Alt.*, vol. III, pp. 130, 131) Ptolemy must have meant the Dharmôdaya of the Hindus, although he has assigned far too high a latitude for its junction with the Ganges, 28° instead of only 22° 13′. It is, however, the only considerable stream which flows to the Ganges from the Bear Mountains. It passes Ramgarh and Bardhwân, and joins the Hughlî not far from the sea, a little to the east of Tamluk. It is commonly called the Damuda River.

The mouths of the Ganges:—In addition to

the remarks already made regarding these mouths I may here quote a passage from Wilford on this topic: "Ptolemy's description," he says (*Asiat. Researches*, vol. XIV, pp. 464-6) "of the Delta of the Ganges is by no means a bad one, if we reject the latitudes and longitudes, which I always do, and adhere solely to his narrative, which is plain enough. He begins with the western branch of the Ganges or Bhâgîrathî, and says that it sends one branch to the right or towards the west, and another towards the east, or to the left. This takes place at Trivênî, so called from three rivers parting, in three different directions, and it is a most sacred place. The branch which goes towards the right is the famous Sarasvatî; and Ptolemy says that it flows into the Kambyson mouth, or the mouth of the Jelasor river, called in Sanskrit Śaktimatî, synonymous with Kambu or Kambuj, or the river of shells. This communication does not exist, but it was believed to exist, till the country was surveyed. This branch sends another arm, says our author, which affords a passage into the great mouth, or that of the Bhâgîrathî or Ganges. This supposed branch is the Rûpanârâyaṇa, which, if the Sarasvatî ever flowed into the Kambyson mouth, must of course have sprung from it, and it was then natural to suppose that it did so. M. D'Anville has brought the Sarasvatî into the Jelasor river in his maps, and supposed that the communication took place a little above a village called Danton, and if we look into the *Bengal Atlas*, we shall perceive that during the rains, at least, it is possible to go by water, from Hughlî, through

the Sarasvatî, and many other rivers, to within a few miles of Danton, and the Jelasor river. The river, which according to Ptolemy branches out towards the east, or to the left, and goes into the Kambarikan mouth is the Jumnâ, called in Bengal Jubunâ. For the Ganges, the Jumnâ and the Sarasvatî unite at the Northern Trivêṇî or Allâhâbâd, and part afterwards at this Trivêṇî near Hughlî . . . called in the spoken dialects Terboni. Though the Jumnâ falls into the Kambarikan mouth, it does by no means form it; for it obviously derives its name from the Kambâdâṛâ or Kambâraka river, as I observed before. Ptolemy says that the Ganges sends an arm towards the east or to the left, directly to the false mouth or Hariṇaghaṭṭâ. From this springs another branch to Antibolê, which of course is the Ḍhâkkâ branch called the Padmâ or Puddâgaṅgâ. This is a mistake, but of no great consequence, as the outlines remain the same. It is the Paddâ or Ḍhâkkâ branch, which sends an arm into the Hariṇaghaṭṭâ. The branching out is near Kasti and Komarkalli, and under various appellations it goes into the Hariṇaghaṭṭâ mouth."

Besides the tributaries of the Ganges already mentioned, Ptolemy refers to two others which it receives from the range of Bêpyrrhos. These are not named, but one is certainly the Kauśikî and the other ought to be either the Gaṇḍakî or the Tîstâ.

31. And of the other rivers the positions are thus:

The sources of the River Namados in the Ouindion range ..	127°	26° 30′

The bend of the river at Sêripala .....116° 30′ 22°
Its confluence with the River Môphis .....115° 18° 30′

32. Sources of the River Nanagouna from the Ouindion range.....132° 26° 30′
Where it bifurcates into the Goaris and Binda .....114° 16°

33. Sources of the Pseudostomos from the Bêttigô range ....123° 21°
The point where it turns .....118° 30′ 17° 15′

34. Sources of the River Baris in the Bêttigô range.....127° 26° 30′
Sources of the River Sôlên in the Bêttigô range .....127° 20° 30′
The point where it turns .....124° 18°

35. Sources of the River Khabêros in the Adeisathros range .....132° 22°

36. Sources of the River Tyna in the Oroudian (or Arouëdan) Mountains .....133° 17°

37. Sources of the River Maisôlos in the same mountains .....134° 30′ 17° 30′

38. Sources of the River Manda in the same mountains .....136° 30′ 16° 30′

39. Sources of the River Toundis in the Ouxenton range ..137° 22° 30′

40. Sources of the River Dôsarôn in the same range .....140° 24°

41. Sources of the River Adamas in the same range .....142° 24°

These rivers have been all already noticed, with the exception of the M ô p h i s. This is now the Mahî, a considerable river which flows into the Gulf of Khambât at its northern extremity at a distance of about 35 miles north from the estuary of the Narmâda. Ptolemy is in error in making the two rivers join each other. The Môphis is mentioned in the *Periplûs* as the M a ï s. In this list the spelling of the names of two of the rivers of Orissa has been slightly changed, the Manada into Manda and Tyndis into Toundis.

Ptolemy proceeds now (following as mach as possible the order already observed) to give a list of the different territories and peoples of India classified according to the river-basins, together with the towns belonging to each territory and each people (§§42—93), *and closes the chapter by mentioning the small islands that lay adjacent to the coast. He begins with the basin of the Kôphês, part of which he had already described in the 6th Book.*

42. The order of the territories in this division (India intra Gangem) and of their cities or villages is as follows :—

Below the sources of the Kôa are located the Lambatai, and their mountain region extends upwards to that of the Kômêdai.

Below the sources of the Souastos is Souastênê.

Below those of the Indus are the Daradrai, in whose country the mountains are of surpassing height.

Below the sources of the Bidaspês and of the Sandabal and of the Adris is Kaspeiria.

Below the sources of the Bibasis and of the Zaradros and of the Diamouna and of the Ganges is Kylindrinê, and below the Lambatai and Souastênê is Gôryaia.

Ptolemy's description of the regions watered by the Kôphên and its tributaries given here and in the preceding book may well strike us with surprise, whether we consider the great copiousness of its details, or the way in which its parts have been connected and arranged. It is evident that he was indebted for his materials here chiefly to native sources of information and itineraries of merchants or caravans, and that he did not much consult the records, whether historical or geographical, of Alexander's expedition, else he would not have failed to mention such places as Alexandria, under Kaukasos, Massaga, Nysa, Bazira, the rock Aörnos, and other localities made memorable by that expedition.

In describing the basin of the Kôphên he divides it into two distinct regions—the high region and the lower, a distinction which had been made by the contemporaries of Alexander. The high region formed the country of the Paropanisadai, and this Ptolemy has described in the 18th chapter of the 6th Book. He now describes the

lower region which he regards as a part of India. (V. Saint-Martin, *Étude*, pp. 62-3).

The L a m b a t a i were the inhabitants of the district now called Lamghân, a small territory lying along the northern bank of the Kâbul river bounded on the west by the Alingâr and Kunâr rivers, and on the north by the snowy mountains. Lamghân was visited in the middle of the 7th century by Hiuen Tsiang, who calls it Lan-po, and notes that its distance eastward from Kapisênê, to which before his time it had become subject, was 600 *li* (equal to 100 miles). The name of the people is met with in the *Mahâbhârata* and in the *Paurâṇik* lists under the form Lampâka. Cunningham would therefore correct Ptolemy's Lambatai to Lambagai by the slight change of *Γ* for T. A minute account of this little district is given in the *Memoirs of the Emperor Baber*, who states that it was called after Lamech, the father of Noah. The *Dictionary* of Hêmachandra, which mentions the Lampâka, gives as another name of the people that of the Muraṇḍa. Their language is Pushtu in its basis. (See Cunningham's *Geog. of Anc. India*, pp. 42-3; Saint-Martin, *Étude*, pp. 74-5; also his *L'Asie Central*, p. 48; Lassen, *Ind. Alt.*, voł. I, p. 422).

S o u a s t ê n ê designates the basin of the Souastos, which, as has already been noticed, is the river now called the river of Swât. The full form of the name is Śubhavastu, which by the usual mode of contraction becomes Subhâstu or Suvâstu. Souastênê is not the indigenous name of the district, but one evidently formed for it by the Greeks. It is the country now inhabited

by the warlike tribes of the Yuzofzaïs which appears to have been called in ancient times with reference to the rich verdure and fertility of its valleys Udyâna, that is, 'a garden' or 'park.' It was visited by Hiuen Tsiang, who calls it the kingdom of U-chang-na.

The D a r a d r a i :—Ptolemy has somewhat disfigured the name of these mountaineers, who are mentioned in the *Mahâbhârata* and in the *Chronicle of Kaśmîr* as the Darada. They inhabited the mountain-region which lay to the east of the Lambatai and of Souastênê, and to the north of the uppermost part of the course of the Indus along the north-west frontier of Kaśmîr. This was the region made so famous by the story of the gold-digging ants first published to the west by Hêrodotos (lib. III, c. cii), and afterwards repeated by Megasthenês, whose version of it is to be found in Strabo (lib. XV, c. i, 44) and in Arrian's *Indika* (sec. 15) and also in Pliny (lib. VI, c. xxi and lib. XI, c. xxxvi). The name of the people in Strabo is Derdai, in Pliny Dardae, and in Dionys. Periêg. (v. 1138) Dardanoi. Their country still bears their name, being called Dardistân. The Sanskrit word *darad* among other meanings has that of 'mountain.' As the regions along the banks of the Upper Indus produced gold of a good quality, which found its way to India and Persia, and other countries farther west, it has been supposed that the Indus was one of the four rivers of Paradise mentioned in the book of *Genesis*, viz., the Pishon, "which compasseth the whole land of Havilah, where there is gold; and the gold of that land is good." This opinion has been advocated by

scholars of high name and authority. Havilah they take to be in a much altered form, the Sanskrit *sarôvara*, 'a lake,' with reference perhaps to the lake in Tibet called M a n a s a r ô v a r a. Boscawen, however, has pointed out that there was a river called the Pisanu, belonging to the region between Nineveh and Babylon, where he locates paradise.

K a s p e i r i a :—The name and the position concur in indicating this to be the valley of Kaśmîr, a name which, according to Burnouf, is a contraction of *Kaśyapamîra*, which is thought with good reason to be the original whence came the Kaspapyros of the old Geographer Hekataios and the Kaspatyros of Hêrodotos (lib. III, c. cii), who tells us (lib. IV, c. xliv) that it was from the city of that name and from the Paktyikan land that Skylax the Karyandian started on his voyage of discovery down the Indus in order to ascertain for Darius where that river entered the sea. It cannot be determined with certainty where that city should be located, but there can be no good reason, as Wilson has shown (in opposition to the views of Wilford, Heeren, Mannert, and Wahl) for fixing it on any other river than the Indus. "We have no traces," he says, "of any such place as Kaspatyrus west of the Indus. Alexander and his generals met with no such city, nor is there any other notice of it in this direction. On the east of the river we have some vestige of it in oriental appellations, and Kaspatyrus is connected apparently with Kaśmîr. The preferable reading of the name is Kaspa-pyrus. It was so styled by Hecataeus, and the alteration is probably

an error. Now Kaśyapa-pur, the city of Kaśyapa, is, according to Sanskrit writers, the original designation of Kaśmîr; not of the province of the present day, but of the kingdom in its palmy state, when it comprehended great part of the Panjâb, and extended no doubt as far as, if not beyond, the Indus."—*Ar. Antiq.*, p. 137.

In the time of Ptolemy the kingdom of Kaśmîr was the most powerful state in all India. The dominions subject to its sceptre reached as far south as the range of the Vindhyas and embraced, together with the extensive mountain region wherein the great rivers of the Panjâb had their sources, a great part of the Panjâb itself, and the countries which lay along the courses of the Jamnâ and the Upper Ganges. So much we learn from Ptolemy's description which is quite in harmony with what is to be found recorded in the *Râjataraṅgiṇî*, regarding the period which a little preceded that in which Ptolemy wrote—that the throne of Kaśmîr was then occupied by a warlike monarch called Mêghâvahana who carried his conquests to a great distance southward (*Râjatar.* vol. III, pp. 27 sqq.). The valley proper of Kaśmîr was the region watered by the Bidaspês (Jhelam) in the upper part of its course. Ptolemy assigns to it also the sources of the Sandabal (Chenâb) and of the Rhouadîs (Râvî) and thus includes within it the provinces of the lower Himâlayaṅ range that lay between Kaśmîr and the Satlaj.

K y l i n d r i n ê designated the region of lofty mountains wherein the Vipâśâ, the Śatadru, the Jamnâ and the Ganges had their sources. The

inhabitants called K u l i n d a are mentioned in the *Mahâbhârata* in a long list there given of tribes dwelling between Mêru and Mandara and upon the Śailôdâ river, under the shadow of the Bambu forests, whose king presented lumps of ant-gold at the solemnity of the inauguration of Yudhishṭhira as universal emperor. Cunningham would identify Kylindrinê with "the ancient kingdom of Jâlandhara which since the occupation of the plains by the Muḥammadans has been confined almost entirely to its hill territories, which were generally known by the name of Kângra, after its most celebrated fortress." Saint-Martin, however, is unable to accept this identification. A territory of the name of K u l u t a, which was formed by the upper part of the basin of the Vipâśâ, and which may be included in the Kylindrinê of Ptolemy, is mentioned in a list of the *Varâha Saṁhitâ*. Kuluta was visited by the Chinese pilgrim, Hiuen Tsiang, who transcribes the name K'iu-lu-to, a name which still exists under the slightly modified form of Koluta. (See Lassen, *Ind. Alt.* vol. I, p. 547; Wilson, *Ar. Antiq.* p. 135 n.; Saint-Martin, *Étude*, 217; Cunningham, *Geog.* pp. 136—138).

G ô r y a i a designates the territory traversed by the Gouraios or river of Ghor, which, as has already been noticed, is the affluent of the Kâbul river now called the Landaï, formed by the junction of the river of Pañjkora and the river of Swât. Alexander on his march to India passed through Gôryaia, and having crossed the River Gouraios entered the territory of the Assakênoi. The passage of the river is thus de-

scribed by Arrian (*Anab.* lib. IV, c. xxv): "Alexander now advanced with a view to attack the Assakênoi, and led his army through the territory of the Gouraioi. He had great difficulty in crossing the Gouraios, the eponymous river of the country, on account of the depth and impetuosity of the stream, and also because the bottom was so strewn with pebbles that the men when wading through could hardly keep their feet." It can scarcely be doubted that the Gouraios is the Gaurî mentioned in the 6th Book of the *Mahâbhârata* along with the Suvâstu and the Kampanâ. Arrian's notion that it gave its name to the country by which it flowed has been assented to by Lassen but has been controverted by Saint-Martin, who says (p. 33), "the name of the Gouraioi did not come, as one would be inclined to believe, and as without doubt the Greeks thought, from the river of Gur which watered their territory; the numerous and once powerful tribe of Ghorî, of which a portion occupies still to this day the same district, to the west of the Landaï, can advance a better claim to the attribution of the ancient classical name." In a note to this passage he says: "Kur, with the signification of 'river,' *courant*, is a primitive term common to most of the dialects of the Indo-Germanic family. Hence the name of Kur (Greek, *Κύρος*, *Κύῤῥος*, Lat. Cyrus) common to different rivers of Asia. . . . This name (of Ghorîs or Gûrs) ought to have originally the signification of 'mountaineers.' It is at least a remarkable fact that all the mountain region adjacent to the south of the Western Hindû-kôh and its prolongation in the direction of Herât

have borne or still bear the names of Gûr, Ghôr, or Ghaur, Gurkân, Gurjistân, &c. Let us add that *garayo* in Zend signifies 'mountains.'"

43. And the cities are these :—

Kaisana	120°	34° 20′
Barborana	120° 15′	33° 40′
Gôrya	122°	34° 45′
Nagara or Dionysopolis	121° 45′	33°
Drastoka.....	120° 30′	32° 30′

Kaisana, Barborana and Drastoka are places unknown, but as the same names occur in the list of the towns of the Paropanisadai (lib. VI, c. xviii, 4) it is not improbable, as Saint-Martin conjectures, that the repetition was not made by Ptolemy himself, but through a careless error on the part of some copyist of his works. Cunningham thinks that Drastoka may have designated a town, in one of the *darâs* or 'valleys' of the Koh-Dâman, and that Baborana may be Parwân, a place of some consequence on the left bank of the Ghorband river in the neighbourhood of Opiân or Alexandria Opiane. Kaisana he takes to be the Cartana of Pliny (lib. VI, *c.* xxiii) according to whom it was situated at the foot of the Caucasus and not far from Alexandria, whilst according to Ptolemy it was on the right bank of the Pânjshir river. These data, he says, point to Bêgrâm, which is situated on the right bank of the Pânjshir and Ghorband rivers immediately at the foot of the Kohistân hills, and within 6 miles of Opiân. Bêgrâm also answers the description which Pliny gives of Cartana as *Tetragonis*, or the 'square,' for Masson, in his account of the ruins especially

notices "some mounds of great magnitude, and accurately describing a square of considerable dimensions." A coin of Eukratidês has on it the legend Karisiye Nagara or city of Karisi (*Geog: of Anc. Ind.*, pp. 26–29).

G ô r y a :—Saint-Martin thinks that the position of this ancient city may be indicated by the situation of Mola-gouri, a place on the right or western bank of the River Landaï, as marked in one of Court's maps in the *Jour. Beng. As. Soc.*, vol. VIII, p. 34).

N a g a r a or D i o n y s o p o l i s :—Lassen has identified this with Nanghenhar, the Nagarahâra of Sanskrit, a place mentioned under this name in the *Paurâṇik* Geography, and also in a Buddhistic inscription thought to belong to the 9th century which was found in Behar. The city was visited by Hiuen Tsiang, who calls it Nakie-lo-ho. It was the capital of a kingdom of the same name, which before the time of the pilgrim had become subject to Kapiśa, a state which adjoined it on the west. Its territory consisted of a narrow strip of land which stretched along the southern bank of the Kâbul river from about Jagdalak as far westward as the Khaibar Pass. The city was called also Udyânapura, that is, 'the city of gardens,' and this name the Greeks, from some resemblance in the sound translated into D i o n y s o p o l i s (a purely Greek compound, signifying 'the city of Dionysos,' the god of wine), with some reference no doubt to legends which had been brought from the regions of Paropanisos by the companions of Alexander This name in a mutilated form is found in-

scribed on a medal of Dionysios, one of the Greek kings, who possessed the province of what is now called Afghanistân in the 2nd century B.C. Same traces of the name of Udyânapura still exist, for, as we learn from Masson, "tradition affirms that the city on the plain of Jalâlâbâd was called A j û n a," and the Emperor Baber mentions in his *Memoirs* a place called Adinapur, which, as the same author has pointed out, is now Bala-bâgh, a village distant about 13 miles westward from Jalâlâbâd near the banks of the Surkhrud, a small tributary of the Kâbul river.

As regards the site of N a g a r a h â r a, this was first indicated by Masson, and afterwards fixed with greater precision by Mr. Simpson, who having been quartered for four months at Jalâlâbâd during the late Afghân war took the opportunity of investigating the antiquities of the neighbourhood, which are chiefly of a Buddhist character. He has given an account of his researches in a paper read before the Royal Asiatic Society, and published in the Society's *Journal* (Vol. XIII, pp. 183–207). He there states that he found at a distance of 4 or 5 miles west from Jalâlâbâd numerous remains of what must have been an ancient city, while there was no other place in all the vicinity where he could discover such marked evidences of a city having existed. The ruins in question lay along the right bank of a stream called the Surkhâb, that rushed down from the lofty heights of the Sufaid-koh, and reached to its point of junction with the Kâbul river. The correctness of the identification he could not doubt, since the word 'Nagrak,'

'Nagarat,' or 'Nagara' was still applied to the ruins by the natives on the spot, and since the site also fulfilled all the conditions which were required to make it answer to the description of the position of the old city as given by Hiuen Tsiang. (See Lassen, *Ind. Alt.*, vol. II, p. 335; Saint-Martin's *Asie Centrale*, pp. 52–56; Cunningham, *Geog. of Anc. Ind.*, pp. 44–46; Masson, *Various Journeys*, vol. III, p. 164).

44. Between the Souastos and the Indus the Gandarai and these cities :—

Proklaïs	123°	32°
Naulibi	124° 20′	33° 20′

The Gandarai :—Gandhâra is a name of high antiquity, as it occurs in one of the Vedic hymns where a wife is represented as saying with reference to her husband, "I shall always be for him a Gandhâra ewe." It is mentioned frequently in the *Mahâbhârata* and other post-Vedic works, and from these we learn that it contained the two royal cities of Takshaśilâ (Taxila) and Pushkarâvatî (Peukelaôtis) the former situated to the east and the latter to the west of the Indus. It would therefore appear that in early times the Gandhâric territory lay on both sides of that river, though in subsequent times it was confined to the western side. According to Strabo the country of the Gandarai, which he calls Gandaritis, lay between the Khoaspês and the Indus, and along the River Kôphês. The name is not mentioned by any of the historians of Alexander, but it must nevertheless have been known to the Greeks as early as the times of Hekataios, who as we

learn from Stephanos of Byzantion, calls Kaspapyros a Gandaric city. Hêrodotos mentions the Gandarioi (Book III, c. xci) who includes them in the 7th Satrapy of Darius, along with the Sattagydai, the Dadikai and the Aparytai. In the days of Aśôka and some of his immediate successors Gandhâra was one of the most flourishing seats of Buddhism. It was accordingly visited both by Fa-hian and Hiuen Tsiang, who found it to contain in a state of ruin many monuments of the past ascendancy of their faith. From data supplied by the narratives of these pilgrims Cunningham has deduced as the boundaries of Gandhâra, which they call Kien-to-lo, on the west Lamghân and Jalâlâbâd, on the north the hills of Swât and Bunir, on the east the Indus, and on the south the hills of Kâlabâgh. "Within these limits," he observes, "stood several of the most renowned places of ancient India, some celebrated in the stirring history of Alexander's exploits, and others famous in the miraculous legends of Buddha, and in the subsequent history of Buddhism under the Indo-Scythian prince Kanishka." (*Geog. of Ind.*, p. 48.) Opinions have varied much with regard to the position of the Gandarioi. Rennell placed them on the west of Baktria in the province afterwards called Margiana, while Wilson (*Ar. Antiq.*, p. 131) took them to be the people south of the Hindû-kûsh, from about the modern Kandahâr to the Indus, and extending into the Panjâb and to Kaśmîr. There is, however, no connexion between the names of Gandaria and Kandahâr.

Proklaïs is the ancient capital of Gandhâra,

situated to the west of the Indus, which was mentioned in the preceding remarks under its Sanskrit name P u s h k a l â v a t î, which means 'abounding in the lotus.' Its name is given variously by the Greek writers as Peukelaôtis, Peukolaitis, Peukelas, and Proklaïs, the last form being common to Ptolemy with the author of the *Periplûs*. The first form is a transliteration of the Pâli Pukhalaoti; the form Peukelas which is used by Arrian is taken by Cunningham to be a close transcript of the Pâli Pukkala, and the P r o k l a ï s of Ptolemy to be perhaps an attempt to give the Hindî name of Pokhar instead of the Sanskrit Pushkara. Arrian describes Peukelas as a very large and populous city lying near the Indus, and the capital of a prince called Astês. Ptolemy defines its position with more accuracy, as being on the eastern bank of the river of Souastênê. The *Periplûs* informs us that it traded in spikenard of various kinds, and in kostus and bdellium, which it received from different adjacent countries for transmission to the coast of India. It has been identified with Hasht-nagar (*i.e.*, *eight cities*) which lies at a distance of about 17 miles from Parashâwar (Peshâwar). Perhaps, as Cunningham has suggested, Hasht-nagar may mean not 'eight cities' but 'the city of Astês.'

N a u l i b i:—"It is probable," says Cunningham, "that Naulibi is Nilâb, an important town which gave its name to the Indus; but if so it is wrongly placed by Ptolemy, as Nilâb is to the South of the Kôphês" (*Geog. of Anc. Ind.*, p. 48).

45. Between the Indus and the Bidaspês

towards the Indus the A r s a territory and these cities:—

Ithagouros .....125° 40′ 33° 20′
Taxiala .....125° 32° 15′

A r s a represents the Sanskrit U r a ś a, the name of a district which, according to Cunningham, is to be identified with the modern district of Rash in Dhantâwar to the west of Muzafarâbâd, and which included all the hilly country between the Indus and Kaśmîr as far south as the boundary of Aṭak. It was visited by Hiuen Tsiang, who calls it U-la-shi and places it between Taxila and Kaśmîr. Pliny, borrowing from Megasthenês, mentions a pe'e belonging to these parts called the A r s a g a ı i t a e. The first part of the name answers letter for letter to the name in Ptolemy, and the latter part may point to the tribe Ghilet or Ghilghit, the Gahalata of Sanskrit. (V. Saint-Martin, *Étude*, pp. 59-60). Uraśa is mentioned in the *Mahâbhârata* and once and again in the *Râjataraṅgiṇî*.

I t h a g o u r o s:—The Ithagouroi are mentioned by Ptolemy (lib. VI, c. xvi) is a people of Sêrika, neighbouring on the Issêdones and Throanoi. Saint-Martin takes them to be the Dagors or Dangors, one of the tribes of the Daradas.

T a x i a l a is generally written as Taxila by the classical authors. Its name in Sanskrit is Taksha-śilâ, a compound which means 'hewn rock' or 'hewn stone.' Wilson thinks it may have been so called from its having been built of that material instead of brick or mud, like most other cities in India, but Cunningham prefers to ascribe

to the name a legendary origin. The Pâli form of the name as found in a copper-plate inscription is T a k h a s i l a, which sufficiently accounts for the Taxila of the Greeks. The city is described by Arrian (*Anab.* lib. V, c. viii) as great and wealthy, and as the most populous that lay between the Indus and the Hydaspês. Both Strabo and Hiuen Tsiang praise the fertility of its soil, and the latter specially notices the number of its springs and watercourses. Pliny calls it a famous city, and states that it was situated on a level where the hills sunk down into the plains. It was beyond doubt one of the most ancient cities in all India, and is mentioned in both of the great national Epics. At the time of the Makedonian invasion it was ruled by a prince called Taxilês, who tendered a voluntary submission of himself and his kingdom to the great conqueror. About 80 years afterwards it was taken by Aśôka, the son of Vindusâra, who subsequently succeeded his father on the throne of Magadha and established Buddhism as the state religion throughout his wide dominions. In the early part of the 2nd century B.C. it had become a province of the Græco-Baktrian monarchy. It soon changed masters however, for in 126 B.C. the Indo-Scythian Sus or Abars acquired it by conquest, and retained it in their hands till it was wrested from them by a different tribe of the same nationality, under the celebrated Kanishka. Near the middle of the first century A.D. Apollonius of Tyana and his companion Damis are said to have visited it, and described it as being about the size of Nineveh, walled liked a Greek city, and as

the residence of a sovereign who ruled over what of old was the kingdom of Pôros. Its streets were narrow, but well arranged, and such altogether as reminded the travellers of Athens. Outside the walls was a beautiful temple of porphyry, wherein was a shrine, round which were hung pictures on copper tablets representing the feats of Alexander and Pôros. (Priaulx's *Apollon.*, pp. 13 sqq.) The next visitors we hear of were the Chinese pilgrims Fa-hian in 400 and Hiuen Tsiang, first in 630, and afterwards in 643. To them, as to all Buddhists, the place was especially interesting, as it was the scene of one of Buddha's most meritorious acts of alms-giving, when he bestowed his very head in charity. After this we lose sight altogether of Taxila, and do not even know how or when its ruin was accomplished. Its fate is one of the most striking instances of a peculiarity observable in Indian history, that of the rapidity with which some of its greatest capitals have perished, and the completeness with which even their very names have been obliterated from living memory. That it was destroyed long before the Muḥammadan invasion may be inferred from the fact that its name has not been found to occur in any Muḥammadan author who has written upon India, even though his account of it begins from the middle of the tenth century. Even Albîrûnî, who was born in the valley of the Indus, and wrote so early as the time of Mahmûd of Ghaznî, makes no mention of the place, though his work abounds with valuable information on points of geography. The site of Taxila has been identified by

Cunningham, who has given an account of his explorations in his *Ancient Geography of India* (pp 104-124). The ruins, he says, cover an area of six square miles, and are more extensive, more interesting, and in much better preservation than those of any other ancient place in the Panjâb. These ruins are at a place called Shâh-dhêri, which is just one mile from Kâla-ka-serai, a town lying to the eastward of the Indus, from which it is distant a three days' journey. Pliny says only a two days' journey, but he under-estimated the distance between Peukelaôtis and Taxila, whence his error.

46. Around the Bidaspês, the country of the P a n d o ö u o i, in which are these cities:—

Labaka	127° 30′	34° 15′
Sagala, otherwise called Euthymêdia	126° 20′	32°
Boukephala	125° 30′	30° 20′
Iômousa	124° 15′	30°

The Country of the P a n d o o ö u o i:—The Pâṇḍya country here indicated is that which formed the original seat of the Pâṇḍavas or Lunar race, whose war with the Kauravas or Solar race is the subject of the *Mahâbhârata*. The Pâṇḍavas figure not only in the heroic legends of India, but also in its real history,—princes of their line having obtained for themselves sovereignties in various parts of the country, in Râjputâna, in the Panjâb, on the banks of the Ganges, and the very south of the Peninsula. From a passage in the *Lalitavistara* we learn that at the time of the birth of Śâkyamuni a Pâṇḍava

dynasty reigned at Hastinâpura, a city on the Upper Ganges, about sixty miles to the north-east of Dehli. Megasthenês, as cited by Pliny, mentions a great Pâṇḍava kingdom in the region of the Jamnâ, of which Mathurâ was probably the capital. According to Râjput tradition the celebrated Vikramâditya, who reigned at Ujjain (the O z ê n ê of the Greeks) about half a century B.C., and whose name designates an epoch in use among the Hindûs, was a Pâṇḍava prince. From the 8th to the 12th century of our æra Pâṇḍavas ruled in Indraprastha, a city which stood on or near the site of Dehli. When all this is considered it certainly seems surprising, as Saint-Martin has observed (*Étude*, 206 n.) that the name of the Pandus is not met with up to the present time on any historic monument of the north of India except in two votive inscriptions of Buddhist *stûpas* at Bhilsa. See also *Étude*, pp. 205, 206.

L a b a k a :—"This is, perhaps," says the same author (p. 222), "the same place as a town of Lohkoṭ (Lavakôṭa in Sanskrit) which makes a great figure in the Râjput annals among the cities of the Panjâb, but its position is not known for certain. Wilford, we know not on what authority, identified it with Lâhor, and Tod admits his opinion without examining it."

S a g a l a, called also E u t h y m ê d i a :—Sagala or Sangala (as Arrian less correctly gives the name) is the Sanskrit Sâkala or Sakala, which in its Prakrit form corresponds exactly to the name in Ptolemy. This city is mentioned frequently in the *Mahâbhârata*, from which we learn that it was the

capital of the M a d r a nation, and lay to the west of the Râvî. Arrian (*Anab.* lib. V, cc. xxi, xxii) placed it to the east of the river, and this error on his part has led to a variety of erroneous identifications. Alexander, he tells us, after crossing the Hydraôtês (Râvî) at once pressed forward to Sangala on learning that the Kathaians and other warlike tribes had occupied that stronghold for the purpose of opposing his advance to the Ganges. In reality, however, Alexander on this occasion had to deal with an enemy that threatened his rear, and not with an enemy in front. He was in consequence compelled, instead of advancing eastward, to retrace his steps and recross the Hydraôtês. The error here made by Arrian was detected by General Cunningham, who, with the help of data supplied by Hiuen Tsiang discovered the exact site which Sagala had occupied. This is as nearly as possible where *Sangla-wala-tiba* or 'Sanglala hill' now stands. This Sangala is a hill with traces of buildings and with a sheet of water on one side of it. It thus answers closely to the description of the ancient Sangala in Arrian and Curtius, both of whom represent it as built on a hill and as protected on one side from attacks by a lake or marsh of considerable depth. The hill is about 60 miles distant from Lâhor, where Alexander probably was when the news about the Kathaians reached him. This distance is such as an army by rapid marching could accomplish in 3 days, and, as we learn that Alexander reached Sangala on the evening of the third after he had left the Hydraôtês, we have here a strongly confirmative proof of the correctness of the identi-

fication. The Makedonians destroyed Sagala, but it was rebuilt by Dêmetrios, one of the Græco-Baktrian kings, who in honour of his father Euthydêmos called it E u t h y d ê m i a. From this it would appear that the reading *Euthymêdia* as given in Nobbe's and other texts, is erroneous—(see Cunningham's *Geog. of Anc. Ind.*, pp. 180–187) *cf.* Saint-Martin, pp. 103–108).

47. The regions extending thence towards the east are possessed by the K a s p e i r a i o i, and to them belong these cities :—

48. Salagissa	129° 30′	34° 30′
Astrassos	131° 15′	34° 15′
Labokla	128°	33° 20′
Batanagra	130°	33° 30′
Arispara	130°	32° 50′
Amakatis	128° 15′	32° 20′
Ostobalasara	129°	32°
49. Kaspeira	127°	31° 15′
Pasikana	128° 30′	31° 15′
Daidala	128°	30° 30′
Ardonê	126° 15′	30° 10′
Indabara	127° 15′	30°
Liganeira	125° 30′	29°
Khonnamagara	128°	29° 20′
50. Modoura, the *city* of the gods	125°	27° 30′
Gagasmira	126° 40′	27° 30′
Êrarasa, a Metropolis	123°	26°
Kognandaua	124°	26°

B o u k e p h a l a :—Alexander, after the battle

on the western bank of the Hydaspês in which he defeated Pôros, ordered two cities to be built, one N i k a i a, so called in honour of his victory (*nikê*), and the other Boukephala, so called in honour of his favourite horse, Boukephalos, that died here either of old age and fatigue, or from wounds received in the battle. From the conflicting accounts given by the Greek writers it is difficult to determine where the latter city stood. If we follow Plutarch we must place it on the eastern bank of the Hydaspês, for he states (*Vita Alexandre*) that Boukephalos was killed in the battle, and that the city was built on the place where he fell and was buried. If again we follow Strabo (lib. XV, c. i, 29) we must place it on the west bank at the point where Alexander crossed the river which in all probability was at Dilâwar. If finally we follow Arrian we must place it on the same bank, but some miles farther down the river at Jalâlpur, where Alexander had pitched his camp, and this was probably the real site. Boukephala seems to have retained its historical importance much longer than its sister city, for besides being mentioned here by Ptolemy it is noticed also in Pliny (lib. VI, c. xx) who says that it was the chief of three cities that belonged to the Asini, and in the *Periplûs* (sec. 47) and elsewhere. N i k a i a, on the other hand, is not mentioned by any author of the Roman period except Strabo, and that only when he is referring to the times of Alexander. The name is variously written Boukephala, Boukephalos, Boukephalia, and Boukephaleia. Some authors added to it the surname of Alexandria, and in the *Peutinger*

Tables it appears as Alexandria Bucefalos. The horse Boukephalos was so named from his 'brow' being very broad, like that of an 'ox.' For a discussion on the site of Boukephala see Cunningham's *Geog. of Anc. Ind.*, pp. 159 sqq.

Iômousa is probably Jamma, a place of great antiquity, whose chiefs were reckoned at one time among the five great râjas of the north. It doubtless lay on the great highway that led from the Indus to Palibothra.

List of cities of the Kaspeiraioi:—This long list contains but very few names that can be recognized with certainty. It was perhaps carelessly transcribed by the copyists, or Ptolemy himself may have taken it from some work the text of which had been already corrupted. Be that as it may, we may safely infer from the constancy with which the figures of latitude in the list decrease, that the towns enumerated were so many successive stages on some line of road that traversed the country from the Indus to Mathurâ on the Jamnâ. Salagissa, Arispara, Pasikana, Liganeira, Khonnamagara and Kognandaua are past all recognition; no plausible conjecture has been made as to how they are to be identified.

Astrassos:—This name resembles the Atrasa of Idrîsî, who mentions it as a great city of the Kanauj Empire (*Étude*, p. 226).

Labokla:—Lassen identified this with Lâhor, the capital of the Panjâb (*Ind. Alt.*, vol. III, p. 152). Thornton and Cunningham confirm this identification. The city is said to have been founded by Lava or Lo, the son of Râma, after whom it was

named Lohâwar. The *Labo* in Labo-kla must be taken to represent the name of Lava. As for the terminal *kla*, Cunningham (*Geog. of Anc. Ind.*, p. 198) would alter it to *laka* thus, making the whole name Labolaka for Lavâlaka or 'the abode of Lava.'

B a t a n a g r a:—Ptolemy places this 2 degrees to the east of Labokla, but Saint-Martin (p. 226) does not hesitate to identify it with Bhatnair (for Bhaṭṭanagara) 'the town of the Bhatis' though it lies nearly three degrees south of Lâhor. Yule accepts this identification. A different reading is K a ṭ a n a g a r a.

A m a k a t i s (v. l. Amakastis).—According to the table this place lay to the S.E. of Labokla but its place in the map is to the S.W. of it. Cunningham (pp. 195–197) locates it near Shekohpur to the south of which are two ruined mounds which are apparently the remains of ancient cities. These are called Amba and Kâpi respectively, and are said to have been called after a brother and a sister, whose names are combined in the following couplet:—

Amba-Kapa pai larai
Kalpi bahin chhurâwan ai.

When strife arose 'tween Amb and Kăp
Their sister Kalpi made it up.

"The junction of the two names," Cunningham remarks, "is probably as old as the time of Ptolemy, who places a town named Amakatis or Amakapis to the west of the Râvî, and in the immediate neighbourhood of Labokla or Lâhor." The distance of the mounds referred to from Lâhor is about 25 miles.

Ostobalasara (v. l. Stòbolasara) Saint-Martin has identified this with Thanesar (Sthânêśvara in Sanskrit) a very ancient city, celebrated in the heroic legends of the Pâṇḍavas. Cunningham however thinks that Thanesar is Ptolemy's **Batangkaisara** and suggests that we should reap Satan-aisara to make the name approach nearer to the Sanskrit Sthânêśvara—the Sa-ta-ni-shi-fa-lo of Hiuen Tsiang (p. 331).

Kaspeira:—"If this name," says Saint-Martin, (p. 226) "is to be applied, as seems natural, to the capital of Kaśmîr, it has been badly placed in the series, having been inserted probably by the ancient Latin copyists."

Daidala:—An Indian city of this name is mentioned by Stephanos of Byzantion, but he locates it in the west. Curtius also has a Daedala (lib. VIII, c. x), a region which according to his account was traversed by Alexander before he crossed the Khoaspês and laid siege to Mazaga. Yule in his map places it doubtfully at Dudhal on the Khaghar river to the east of Bhatneer, near the edge of the great desert.

Ardonê:—Ahroni, according to Yule, a place destroyed by Tîmûr on his march, situated between the Khaghar and Chitang rivers, both of which lose themselves in the great desert.

Indabara is undoubtedly the ancient **Indraprastha**, a name which in the common dialects is changed into Indabatta (Indopat), and which becomes almost Indabara in the cerebral pronunciation of the last syllable. The site of this city was in the neighbourhood of Dehli. It was the capital city of the Pâṇḍavas. The Prâkṛit

form of the name is Indrabaṭṭha. (Lassen, vol. III, p. 151).

M o d o u r a, the city of the gods :— There is no difficulty in identifying this with Mathurâ (Muttra) one of the most sacred cities in all India, and renowned as the birthplace of Kṛishṇa. Its temples struck Mahmûd of Ghaznî with such admiration that he resolved to adorn his own capital in a similar style. The name is written by the Greeks *Methora* as well as *Modoura*. It is situated on the banks of the Jamnâ, higher up than Agra, from which it is 35 miles distant. It is said to have been founded by Śatrughna, the younger brother of Râma. As already mentioned it was a city of the Pâṇḍavas whose power extended far to westward.

G a g a s m i r a :—Lassen and Saint Martin agree in recognizing this as Ajmîr. Yule, however, objects to this identification on the ground that the first syllable is left unaccounted for, and proposes Jajhar as a substitute. Gegasius, he argues, represents in Plutarch Yayâti, the great ancestor of the Lunar race, while Jajhpûr in Orissa was properly Yayâtipûra. Hence probably in Jajhar, which is near Delhi, we have the representative of Gagasmira.

E r a r a s a :—Ptolemy calls this a metropolis. It appears, says Yule, to be Girirâja, 'royal hill,' and may be Goverdhan which was so called, and was a capital in legendary times (*Ind. Antiq.*, vol. I, p. 23). Saint-Martin suggests Vârâṇasî, now Banâras, which was also a capital. He thinks that this name and the next, which ends the list, were additions of the Roman copyists.

51. Still further to the east than the Kas peiraioi are the G y m n o s o p h i s t a i, and after these around the Ganges further north are the D a i t i k h a i with these towns:—

Konta	133° 30′	34° 40
Margara	135°	34°
Batangkaissara and east of the river	132° 40′	33° 20′
Passala	137°	34° 15′
Orza	136°	33° 20′

G y m n o s o p h i s t a i:—This Greek word means 'Naked philosophers,' and did not designate any ethnic or political section of the population, but a community of religious ascetics or hermits located along the Ganges probably, as Yule thinks in the neighbourhood of Hardwâr and also according to Benfey, of Dehli, *Indien*, p. 95. For an account of the Gymnosophists see *Ind. Antiq.*, vol. VI, pp. 242–244.

D a i t i k h a i:—This name is supposed to represent the Sanskrit *jaṭika*, which means 'wearing twisted or plaited hair.' The name does not occur in the lists in this form but Kern, as Yule states, has among tribes in the north-east "Demons with elf locks" which is represented in Wilford by *Jaṭi-dhara*.

K o n t a, says Saint-Martin (*Etude*, p. 321) is probably Kuṇḍâ on the left bank of the Jamnâ to the south-east of Saharanpûr.

M a r g a r a:—Perhaps, according to the same authority, Marhâra near the Kalindi River to the north-east of Agra.

B a t a n g k a i s s a r a:—Yule objecting to Saint-Martin's identification of this place with Bhatkashaur in Saharanpur pargaṇa, on the ground of its being a modern combination, locates it, but doubtingly, at Kesarwa east of the Jamnâ, where the position suits fairly.

P a s s a l a:—Pliny mentions a people called P a s s a l a e, who may be recognized as the inhabitants of Pañchâla or the region that lay between the Ganges and the Jamnâ, and whose power, according to the *Mahâbhârata*, extended from the Himâlayas to the Chambal River. Passala we may assume was the capital of this important state, and may now, as Saint-Martin thinks, be represented by Bisauli. This was formerly a considerable town of Rohilkhand, 30 miles from Sambhal towards the south-east, and at a like distance from the eastern bank of the Ganges.

O r z a is perhaps Sarsi situated on the Râmgaṅgâ river in the lower part of its course.

52. Below these are the A n i k h a i with these towns:—

Persakra	134°	32° 40′
Sannaba	135°	32° 30′
Toana to the east of the river	136° 30′	32°

53. Below these P r a s i a k ê with these towns:—

Sambalaka	132° 15′	31° 50′
Adisdara	136°	31° 30′
Kanagora	135°	30° 40′
Kindia	137°	30° 20′
Sagala, and east of the river	139°	30° 20′

Aninakha .....137° 20′ 31° 40′
Koangka .....138° 20′ 31° 30′

A n i k h a i (v. ll. N a n i k h a i, M a n i k h a i):—This name cannot be traced to its source. The people it designated must have been a petty tribe, as they had only 3 towns, and their territory must have lain principally on the south bank of the Jamnâ. Their towns cannot be identified. The correct reading of their name is probably *Manikhai*, as there is a town on the Ganges in the district which they must have occupied called Manikpur. There is further a tribe belonging to the Central Himâlaya region having a name slightly similar, Manga or Mangars, and the *Âîn-i-Akbarî* mentions a tribe of Manneyeh which had once been powerful in the neighbourhood of Dehli (*Étude*, p. 322). The form Nanikha would suggest a people named in the *Mahâbhârata* and the *Purâṇas*, the N a i m i s h a s who lived in the region of the Jamnâ.

P r a s i a k ê:—This word transliterates the Sanskrit *Prâchyaka* which means 'eastern' and denoted generally the country along the Ganges. It was the country of the Prasii, whose capital was P a l i b o t h r a, now Pâtnâ, and who in the times immediately subsequent to the Makedonian invasion had spread their empire from the mouths of the Ganges to the regions beyond the Indus. The Prasiakê of Ptolemy however was a territory of very limited dimensions, and of uncertain boundaries. Though seven of its towns are enumerated Palibothra is not among them, but is mentioned afterwards as the capital of the Mandalai and placed more than 3 degrees farther south than

the most southern of them all. Yule remarks upon this: "Where the tables detail cities that are in Prasiakê, cities among the Poruari, &c., we must not assume that the cities named were really in the territories named; whilst we see as a sure fact in various instances that they were not. Thus the Mandalae, displaced as we have mentioned, embrace Palibothra, which was notoriously the city of the Prasii; while Prasiakê is shoved up stream to make room for them. Lassen has so much faith in the uncorrected Ptolemy that he accepts this, and finds some reason why Prasiakê is not the land of the Prasii but something else."

S a m b a l a k a is Sambhal, already mentioned as a town of Rohilkhand. Sambalaka or Sambhala is the name of several countries in India, but there is only this one town of the name that is met with in the Eastern parts. It is a very ancient town and on the same parallel as Dehli.

A d i s d a r a:—This has been satisfactorily identified with A h i c h h a t r a, a city of great antiquity, which figures in history so early as the 14th century B.C. At this time it was the capital of Northern Pañchâla. The form of the name in Ptolemy by a slight alteration becomes *Adisadra*, and this approximates closely to the original form. Another city so called belonged to Central India, and this appears in Ptolemy as A d e i s a t h r a, which he places in the country of the Bêttigoi. The meaning of the name Ahi-chhattra is 'serpent umbrella' and is explained by a local legend concerning Âdi-Râjâ and the serpent demon, that while the Râjâ was asleep a serpent formed

a canopy over him with its expanded hood. The fort is sometimes called Adikoṭ, though the commoner name is Ahi-chhatar, sometimes written Ahikshêtra. The place was visited by Hiuen Tsiang. In modern times it was first visited by Captain Hodgson, who describes it as the ruins of an ancient fortress several miles in circumference, which appears to have had 34 bastions, and is known in the neighbourhood by the name of the Pâṇḍu's Fort. It was visited afterwards by Cunningham (*Anc. Geog. of Ind.*, pp. 359—363).

K a n a g o r a :—This, as Saint-Martin points out, may be a corruption for Kanagoza, a form of K a n y â k u b j a or Kanauj. This city of old renown was situated on the banks of the Kâlînadî, a branch of the Ganges, in the modern district of Farrukhâbâd. The name applies not only to the city itself but also to its dependencies and to the surrounding district. The etymology (*kanyâ*, 'a girl,' and *kubja*, 'round-shouldered' or 'crooked') refers to a legend concerning the hundred daughters of Kuśanâbha, the king of the city, who were all rendered crooked by Vâyu for non-compliance with his licentious desires (see also Beal, *Buddhist Records*, vol. I, p. 209). The ruins of the ancient city are said to occupy a site larger than that of London. The name recurs in another list of towns under the form Kanogiza, and is there far displaced.

K i n d i a may be identified with Kant, an ancient city of Rohilkhand, the Shâhjahânpur of the present day. Yule hesitates whether to identify it thus or with Mirzapur on the Ganges.

S a g a l a :—"Sagala," says Saint-Martin (*Étude*,

p. 326) "would carry us to a town of Sakula or Saghêla, of which mention is made in the Buddhist Chronicles of Ceylon among the royal cities of the North of India, and which Turnour believes to be the same town as K u ś i n a g a r a, celebrated as the place where Buddha Śâkyamuni obtained *Nirvâṇa*. Such an identificatiou would carry us to the eastern extremity of Kôśala, not far from the River Gaṇḍakî.

K o a n g k a ought to represent the Sanskrit *kanaka*, 'gold.' Mention is made of a town called in the Buddhistic legends K a n a k a v a t î (abounding in gold), but no indication is given as to where its locality was (*Étude*, p. 326).

54. South of this S a u r a b a t i s with these towns:—

Empêlathra	130°		30°
Nadoubandagar	138°	40′	29°
Tamasis	133°		29°
Kouraporeina	130°		29°

S a u r a b a t i s:—This division is placed below Prasiakê. The ordinary reading is S a n d r a b a t i s, which is a transliteration of the Sanskrit Chandravatî. The original, Saint-Martin suggests, may have been Chhattravatî, which is used as a synonym of Ahikshêtra, and applies to that part of the territory of Pañchâla, which lies to the east of the Ganges. He thinks it more than probable that S a n d r a b a t i s, placed as it is just after a group of towns, two of which belong to Ahikshêtra, does not differ from this Chhattravatî, the only country of the name known to Sanskrit Geography in the Gangetic region. None of the

four towns can be identified. (See Lassen, *Ind. Alt.* vol. I, p. 602; *Étude*, p. 326). Yule, however, points out that this territory is one of those which the endeavour to make Ptolemy's names cover the whole of India has greatly dislocated, transporting it from the S.W. of Râjputâna to the vicinity of Bahâr. His map locates Sandrabitis (Chandrabati) between the River Mahî and the Ârâvalî mountains.

55. And further, all the country along the rest of the course of the Indus is called by the general name of I n d o-S k y t h i a. Of this the insular portion formed by the bifurcation of the river towards its mouth is P a t a l ê n ê, and the region above this is A b i r i a, and the region about the mouths of the Indus and Gulf of Kanthi is S y r a s t r ê n ê. The towns of Indo-Skythia are these: to the west of the river at some distance therefrom:—

56. Artoarta.....	121° 30′	31° 15′
Andrapana	121° 15′	30° 40′
Sabana	122° 20′	32°
Banagara	122° 15′	30° 40′
Kodrana	121° 15′	29° 20′

Ptolemy from his excursion to the Upper Ganges now reverts to the Indus and completes its geography by describing I n d o-S k y t h i a, a vast region which comprised all the countries traversed by the Indus, from where it is joined by the river of Kâbul onward to the ocean. We have already pointed out how Ptolemy's description is here vitiated by his making the combined stream of the Panjâb

rivers join the Indus only one degree below its junction with the Kâbul, instead of six degrees, or half way between that point and the ocean. The egregious error he has here committed seems altogether inexcusable, for whatever may have been the sources from which he drew his information, he evidently neglected the most accurate and the most valuable of all—the records, namely, of the Makedonian invasion as transmitted in writings of unimpeachable credit. At best, however, it must be allowed the determination of sites in the Indus valley is beset with peculiar uncertainty. The towns being but very slightly built are seldom of more than ephemeral duration, and if, as often happens they are destroyed by inundations, every trace is lost of their ever having existed. The river besides frequently changes its course and leaves the towns which it abandons to sink into decay and utter oblivion.[24] Such places again as still exist after escaping these and other casualties, are now known under names either altogether different from the ancient, or so much changed as to be hardly recognizable. This instability of the nomenclature is due to the frequency with which the valley has been conquered by foreigners. The period at

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[24] Aristoboulos as we learn from Strabo (lib. XV, c. i. 19) when sent into this part of India saw a tract of land deserted which contained 1,000 cities with their dependent villages, the Indus having left its proper channel, was diverted into another, on the left hand much deeper, and precipitated itself into it like a cataract so that it no longer watered the country by the usual inundation on the right hand, from which it had receded, and this was elevated above the level, not only of the new channel of the river, but above that of the (new) inundation.

which the Skythians first appeared in the valley which was destined to bear their name for several centuries has been ascertained with precision from Chinese sources. We thence gather that a wandering horde of Tibetan extraction called Yuei-chi or Ye-tha in the 2nd century B.C. left Tangut, their native country, and, advancing westward found for themselves a new home amid the pasture-lands of Zungaria. Here they had been settled for about thirty years when the invasion of a new horde compelled them to migrate to the Steppes which lay to the north of the Jaxartes. In these new seats they halted for only two years, and in the year 128 B.C. they crossed over to the southern bank of the Jaxartes where they made themselves masters of the rich provinces between that river and the Oxus, which had lately before belonged to the Grecian kings of Baktriana. This new conquest did not long satisfy their ambition, and they continued to advance southwards till they had overrun in succession Eastern Baktriana, the basin of the Kôphês, the basin of the Etymander with Arakhôsia, and finally the valley of the Indus and Syrastrênê. This great horde of the Yetha was divided into several tribes, whereof the most powerful was that called in the Chinese annals Kwei-shwang. It acquired the supremacy over the other tribes, and gave its name to the kingdom of the Yetha. They are identical with the Kushâns. The great King Kanishka, who was converted to Buddhism and protected that faith was a Kushan. He reigned in the first century of the Christian æra and ruled from Baktriana to

Kaśmîr, and from the Oxus to Surâshṭra. These Kushans of the Panjâb and the Indus are no others than the Indo-Skythians of the Greeks. In the *Râjataraṅgiṇî* they are called Sâka and Turushka (Turks). Their prosperity could not have been of very long duration, for the author of the *Periplûs*, who wrote about half a century after Kanishka's time mentions that "Minnagar, the metropolis of Skythia, was governed by Parthian princes" and this statement is confirmed by Parthian coins being found everywhere in this part of the country. Max Müller, in noticing that the presence of Turanian tribes in India as recorded by Chinese historians is, fully confirmed by coins and inscriptions and the traditional history of the country such as it is, adds that nothing attests the presence of these tribes more clearly than the blank in the Brahmanical literature of India from the first century before to the 3rd after our æra. He proposes therefore to divide Sanskrit literature into two—the one (which he would call the ancient and natural) *before*, and the other (which he would call the modern and artificial) *after* the Turanian invasion. In his Indo-Skythia Ptolemy includes P a t a l ê n ê, A b i r i a, and S y r a s-t r ê n ê. The name does not occur in Roman authors.

P a t a l ê n ê, so called from its capital Patala, was the delta at the mouth of the Indus. It was not quite so large as the Egyptian delta with which the classical writers frequently compare it. Before its conquest by the Skythians it had been subject to the Græco-Baktrian kings. Its reduction to

their authority is attributed by Strabo (lib. XI, c. xii, 1) to Menander or to Dêmetrios, the son of Euthydêmos.

A b i r i a :—The country of the A b h î r a s (the Ahirs of common speech) lay to the east of the Indus, above where it bifurcates to form the delta. In Sanskrit works their name is employed to designate generally the pastoral tribes that inhabit the lower districts of the North-West as far as Sindh. That Abiria is the O p h i r of Scripture is an opinion that has been maintained by scholars of eminence.

S y r a s t r ê n ê represents the Sanskrit Surâshṭra (the modern Soraṭh) which is the name in the *Mahâbhârata* and the *Purâṇas* for the Peninsula of Gujarât. In after times it was called Valabhî. Pliny (lib. VI, c. xx) in his enumeration of the tribes of this part of India mentions the Horatae, who have, he says, a fine city, defended by marshes, wherein are kept man-eating crocodiles that prevent all entrance except by a single bridge. The name of this people is no doubt a corruption of Soraṭh. They have an inveterate propensity to sound the letter *S* as an *H*.

Ptolemy distributes into six groups the names of the 41 places which he specifies as belonging to the Indus valley and its neighbourhood. The towns of the second group indicate by their relative positions that they were successive stages on the great caravan route which ran parallel with the western bank of the river all the way from the Kôphês junction downward to the coast. The towns of the fourth group were in like manner

successive stages on another caravan route, tha which on the eastern side of the river traversed the country from the great confluence with the combined rivers of the Panjâb downward to the Delta. The towns of the first group (5 in number) belonged to the upper part of the valley, and were situated near the Kôphês junction. They are mentioned in a list by themselves, as they did not lie on the great line of communication above mentioned. The third group consists of the two towns which were the chief marts of commerce in the Delta. The towns of the fifth group (7 in number) lay at distances more or less considerable from the eastern side of the Delta. The towns of the sixth group were included in the territory of the K h a t r i a i o i, which extended on both sides of the river from its confluence with the Panjâb rivers as far as the Delta. None of them can now be identified (See *Étude*, pp. 234 sqq.) and of the first group—A r t o a r t a, S a b a n a, K o d r a n a cannot be identified.

A n d r a p a n a:—Cunningham (p. 86) thinks this is probably Draband, or Derâband, near Dera-Ismail-Khân.

B a n a g a r a (for Bana-nagara):—Banna or Banu is often cited as the name of a town and a district that lay on the line of communication between Kâbul and the Indus. It was visited both by Fa-hian and Hiuen Tsiang. The former calls the country Po-na, *i.e.*, Bana. The latter calls it Fa-la-na, whence Cunningham conjectures that the original name was Varana or Barna. It consisted of the lower half of the valley of the Kuram river, and was distant from Lamghân a

15 days' journey southward. It is one of the largest, richest and most populous districts to the west of the Indus.—(*See Geog. of Anc. Ind.*, pp. 84–86).

57. And along the river :—

Embolima	124°	31°
Pentagramma	124°	30° 20′
Asigramma	123°	29° 30′
Tiausa	121° 30′	28° 50′
Aristobathra	120°	27° 30′
Azika	119° 20′	27°
58. Pardabathra	117°	23° 30′
Piska	116° 30′	25°
Pasipêda	114° 30′	24°
Sousikana	112°	22° 20′
Bônis	111°	21° 30′
Kôlaka	110° 30′	20° 40′

E m b o l i m a was situated on the Indus at a point about 60 miles above Aṭṭak, where the river escapes with great impetuosity from a long and narrow gorge, which the ancients mistook for its source. Here, on the western bank, rises the fort of Amb, now in ruins, crowning a position of remarkable strength, and facing the small town of Derbend, which lies on the opposite side of the river. The name of Amb suggested that it might represent the first part of the name of Emb-olima, and this supposition was raised to certitude when it was discovered that another ruin not far off, crowning a pinnacle of the same hill on which Amb is seated, preserves to this day in the tradition of the inhabitants the

name of Balimah. Embolima is mentioned by Arrian (lib. IV, c. xxvii) who represents it as situated at no great distance from the rock of Aornos—which as Abbott has shown, was Mount Mahâban, a hill abutting on the western bank of the Indus, about eight miles west from Embolima. It is called by Curtius Ecbolima (*Anab.* lib. VIII, c. xii) but he gives its position wrongly—at sixteen days' march from the Indus. Ptolemy assigns to it the same latitude and longitude which he assigns to the point where the Kâbul river and Indus unite. It was erroneously supposed that Embolima was a word of Greek origin from ἐκβολή, 'the mouth of a river' conf. Cunningham, *Geog. of Anc. Ind.*, pp. 52 ff.).

Pentagramma:—To the north of the Kôphês at a distance of about forty miles S.W. from Embolima is a place called Panjpûr, which agrees closely both in its position and the signification of its name (5 towns) with the Pentagramma of Ptolemy.

Asigramma and the five towns that come after it cannot be identified.

Pasipêda:—Saint-Martin thinks this may be the Besmeïd of the Arab Geographers, which, as they tell us was a town of considerable importance, lying east of the Indus on the route from Man sûra to Multân. Its name is not to be found in any existing map; but as the Arab itineraries all concur in placing it between Rond (now Roda) and Multân, at a three days' journey from the former, and a two days' journey from the latter, we may determine its situation to have been as far down the river as Mithankôṭ, where the great con-

fluence now takes place. If the fact that Besmeid was on the eastern side of the river staggers our faith in this identification, Saint-Martin would remind us that this part of the tables is far from presenting us with a complete or systematic treatment of the subject, and that the only way open to us of restoring some part at least of these lists is to have recourse to synonyms. He contends that when we find in the Arab itineraries (which are documents of the same nature precisely as those which Ptolemy made use of) names resembling each other placed in corresponding directions, we ought to attach more weight to such coincidences than to the contradictions real, or apparent, which present themselves in the text of our author. Analogous transpositions occur in other lists, as, for instance, in the list of places in the Narmadâ basin. Cunningham, thinking it strange that a notable place of great antiquity like Sehwân, which he identifies with S i n d o m a n a, should not be mentioned by Ptolemy under any recognizable name, hazards the conjecture that it may be either his Piska or Pasipêda. "If we take," he says, "Haidarâbâd as the most probable head of the Delta in ancient times, then Ptolemy's S y d r o s, which is on the eastern bank of the Indus, may perhaps be identified with the old site of Mattali, 12 miles above Haidarâbâd and his Pasipêda with Sehwân. The identification of Ptolemy's O s k a n a with the Oxykanus or Portikanus of Alexander and with the great mound of Mahorta of the present day is I think almost certain. If so, either Piska or Pasipêda must be Sehwân."

S o u s i k a n a :—It is generally agreed that this

is a corrupt reading for Musikana, the royal city of Musikanos, who figures so conspicuously in the records of the Makedonian Invasion, and whose kingdom was described to Alexander as being the richest and most populous in all India. Cunningham (p. 257) identifies this place with Alôr, which was for many ages the capital of the powerful kingdom of Upper Sindh. Its ruins, as he informs us, are situated to the south of a gap in the low range of limestone hills which stretches southwards from Bakhar for about 20 miles until it is lost in the broad belt of sand-hills which bound the Nâra or old bed of the Indus on the west. Through this gap a branch of the Indus once flowed which protected the city on the north-west. To the north-east it was covered by a second branch of the river which flowed nearly at right angles to the other at a distance of three miles. When Alôr was deserted by the river, it was supplanted by the strong fort of Bakhar (p. 258). The same author thinks it probable that Alôr may be the Binagara of Ptolemy, as it is placed on the Indus to the eastward of Oskana, which appears to be the Oxykanus of Arrian and Curtius.

Bônis:—The table places this at the point of bifurcation of the western mouth of the river and an interior arm of it. Arab geographers mention a town called Bania in Lower Sindh, situated at the distance of a single journey below Mansurâ. This double indication would appear to suit very well with Banna, which stands at the point where the Piniarî separates from the principal arm about 25 miles above Ṭhaṭṭha. Its

position is however on the eastern bank of the river. (*Étude*, pp. 238, 239.)

Kôlaka or Kôlala is probably identical with the Krôkala of Arrian's *Indika* (sec. 21), which mentions it as a small sandy island where the fleet of Nearkhos remained at anchor for one day. It lay in the bay of Karâchi, which is situated in a district called Karkalla even now.

59. And in the islands formed by the river are these towns:—

Patala	112° 30′	21°
Barbarei	113° 15′	22° 30′

60. And east of the river at some distance therefrom are these towns:—

Xodrakê	116°	24°
Sarbana	116°	22° 50′
Auxoamis	115° 30′	22° 20′
Asinda	114° 15′	22°
Orbadarou or Ordabari	115°	22°
Theophila	114° 15′	21° 10′
Astakapra	114° 40′	20° 15′

Patala as we learn from Arrian was the greatest city in the parts of the country about the mouths of the Indus. It was situated, he expressly states, at the head of the Delta where the two great arms of the Indus dispart. This indication would of itself have sufficed for its identification, had the river continued to flow in its ancient channels. It has, however, frequently changed its course, and from time to time shifted the point of bifurcation. Hence the question regarding the site of Patala has occasioned much

controversy. Rennell and Vincent, followed by Burnes and Ritter, placed it at Ṭhaṭṭha; Droysen, Benfey, Saint-Martin and Cunningham, at Haidarâbâd (the Nirankoṭ of Arab writers), and McMurdo, followed by Wilson and Lassen, at a place about 90 miles to the north-east of Haidarâbâd. The last supposition is quite untenable, while the arguments in favour of Haidarâbâd which at one time was called Pâṭalapur [25] appear to be quite conclusive (See Sant-Martin, pp. 180 ff., Cunningham, pp. 279–287). Patala figures conspicuously in the history of the Makedonian invasion. In its spacious docks Alexander found suitable accommodation for his fleet which had descended the Indus, and here he remained with it for a considerable time. Seeing how advantageously it was situated for strategy as well as commerce, he strengthened it with a citadel, and made it a military centre for controlling the warlike tribes in its neighbourhood. Before finally leaving India he made two excursions from it to the ocean, sailing first down the western and then down the eastern arm of the river. Pâtâla in Sanskrit mythology was the name of the lowest of the seven regions in the interior of the earth, and hence may have been applied to denote generally the parts where the sun descends into the under world, the land of the west, as in contrast to Prâchayaka, the land of the east. *Pâṭala* in Sanskrit means 'the

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[25] The Brahmans of Sehvân have stated to us that according to local legends recorded in their Sanskrit books Kaboul is the ancient *Chichapalapoura;* Multân, Prahlâdpur; Tattha, Dêval, Haidarâbâd, Nêran, and more anciently Pâtalpuri." Dr. J. Wilson, *Journ. Bombay Asiat. Soc.*, vol. III, 1850, p. 77.

trumpet-flower,' and Cunningham thinks that the Delta may have been so called from some resemblance in its shape to that of this flower. The classic writers generally spell the name as Pattala.

B a r b a r e i :—The position of Barbarei, like that of Patala, has been the subject of much discussion. The table of Ptolemy places it to the north of that city, but erroneously, since Barbarei was a maritime port. It is mentioned in the *Periplûs* under the name of B a r b a r i k o n, as situated on the middle mouth of the Indus, D'Anville in opposition to all the data placed it at Debal Sindhi, the great emporium of the Indus during the middle ages, or at Karâchi, while Elliot, followed by Cunningham, placed it at an ancient city, of which some ruins are still to be found, called Bambhara, and situated almost midway between Karâchi and Ṭhaṭṭha on the old western branch of the river which Alexander econnoitred. Burnes again, followed by Ritter, placed it at Richel, and Saint-Martin a little further still to the east at Bandar Vikkar on the Haʃamari mouth, which has at several periods been the main channel of the river.

X o d r a k ê and S a r b a n a or S a r d a n a :—As the towns in this list are given in their order from north to south, and as Astakapra, the most southern, was situated on the coast of the peninsula of Guʃarât right opposite the mouth of the river Narmadâ, the position of Xodrakê and the other places in the list must be sought for in the neighbourhood of the Ṛaṇ of Kachh. Xodrakê and Sarbana have not been identified, but Yule doubt-

ingly places the latter on the Sambhar Lake. Lassen takes Xodrakê to be the capital of the Xudraka, and locates it in the corner of land between the Vitastâ and Chandrabhâgâ (*Ind. Alt.*, vol. III, p. 145).

Asinda, according to Saint-Martin, may perhaps be Sidhpur (Siddhapura), a town on the river Sarasvatî, which rising in the Âravalîs empties into the Gulf of Kachh (pp. 246-247).

Auxoamis or Axumis:—The same authority would identify this with Sûmî, a place of importance and seat of a Muḥammadan chief, lying a little to the east of the Sarasvatî and distant about twenty-five miles from the sea. Yule however suggests that Aj̇mir may be its modern representation.

Orbadarou or Ordabari:—Yule doubtfully indentifies this with Arbuda or Mount Abû, the principal summit of the Ârâvalis. Pliny mentions alongside of the Horatae (in Guj̇arât) the Odomboeraе which may perhaps be a different form of the same word. The name Uḍumbara is one well-known in Sanskrit antiquity, and designated a royal race mentioned in the *Harivaṅśa*.

Theophila:—This is a Greek compound meaning 'dear to God,' and is no doubt a translation of some indigenous name. Lassen has suggested that of Sardhur, in its Sanskrit form Surâdara, which means 'adoration of the gods.' Sardhur is situated in a valley of the Rêvata mountains so celebrated in the legends of Kṛishṇa. Yule suggests Dewaliya, a place on the isthmus, which connects the peninsula with the mainland. Dr. Burgess, Thân, the chief town of a district

traditionally known as Deva-Pañchâl, lying a little further west than Dewaliya. Col. Watson writes:—"The only places I can think of for Theophila are—1. Gûndi, the ancient Gundigaḍh, one and a half or two miles further up the Hathap river, of which city Hastakavapra was the port. This city was one of the halting-places of the Bhaunagar Brâhmaṇs ere they came to Gogha. It was no doubt by them considered dear to the gods. It was connected with Hastakavapra and was a city of renown and ancient. 2. Pardwa or Priya-dêva, an old village, about four or five miles west of Hathap. It is said to have been contemporary with Valabhî, and there is an ancient Jain temple there, and it is said that the Jains of Gundigaḍh had their chief temple there. 3. Dêvagana, an ancient village at the foot of the west slopes of the Kḥôkras about 18 miles from Hâthap to the westward."

Astakapra:—This is mentioned in the *Periplûs* (sec. 41), as being near a promontory on the eastern side of the peninsula which directly confronted the mouth of the Narmadâ on the opposite side of the gulf. It has been satisfactorily identified with Hastakavapra, a name which occurs in a copper-plate grant of Dhruvasêna I, of Valabhî, and which is now represented by Hathab near Bhavnagar. Bühler thinks that the Greek form is not derived immediately from the Sanskrit, but from an intermediate old Prakṛit word Hastakampra. (See *Ind. Ant.*, vol. V, pp. 204, 314.)

61. Along the river are these towns:—

Panasa	122° 30′	29°
Boudaia	121° 15′	28° 15′

Naagramma	120°	27°
Kamigara	119°	26° 20′
Binagara	118°	25° 20′
Parabali	116° 30′	24° 30′
Sydros	114°	21° 20′
Epitausa	113° 45′	22° 30′
Xoana	113° 30′	21° 30′

P a n a s a :—The table places Panasa one degree farther south than the confluence of the Zaradros and the Indus. Ptolemy, as we have seen, egregiously misplaced this confluence, and we cannot therefore from this indication learn more than that Panasa must have been situated lower down the Indus than Pasipêda (Besmaïd) and Alexandria of the Malli which lay near the confluence. A trace of its name Saint-Martin thinks is preserved in that of Osanpur, a town on the left of the river, 21 miles below Mittankôt.

B o u d a i a :—According to Saint-Martin this is very probably the same place as a fort of Budhya or Bodhpur, mentioned in the Arab chronicles of the conquest of Upper Sindh and situated probably between Alôr and Mittankôṭ. Yule identifies it with Budhia, a place to the west of the Indus and south from the Bolan Pass.

N a a g r a m m a :—This Yule identifies with Naoshera, a place about 20 miles to the south of Besmaïd. Both words mean the same, 'new town.'

K a m i g a r a :—The ruins of Arôr which are visible at a distance of four miles to the south-east of Kori, are still known in the neighbourhood under the name of Kaman. If to this word we add

the common Indian affix *nagar*—'city,' we have a near approach to the Kamigara of Ptolemy.

B i n a g a r a :—This some take to be a less correct form than M i n n a g a r given in the *Periplûs*, where it is mentioned as the metropolis of Skythia, but under the government of Parthian princes, who were constantly at feud with each other for the supremacy. Its position is very uncertain. Cunningham would identify it with Alôr. Yule, following McMurdo, places it much further south near Brâhmanâbâd, which is some distance north from Haidarâbâd. The *Periplûs* states that it lay in the interior above Barbarikon (sec. 38).

X o a n a :—Yule suggests that this may be Sewana, a place in the country of the Bhaulingas, between the desert and the Arâvalîs.

62. The parts east of Indo-Skythia along the coast belong to the country of L a r i k e, and here in the interior to the west of the river Namados is a mart of commerce, the city of

Barygaza	113° 15′	17° 20′

63. To the east of the river :—

Agrinagara	118° 15′	22° 30′
Siripalla	118° 30′	21° 30′
Bammogoura	116°	20° 45′
Sazantion	115° 30′	20° 30′
Zêrogerei	116° 20′	19° 50′
Ozênê, the capital of Tiastanes	117°	20°
Minagara	115° 10′	19° 30′
Tiatoura	115° 50′	18° 50′
Nasika	114°	17°

L a r i k ê :—Lârdêśa was an early name for the territory of Guǰarât and the Northern Koṅkaṇ. The name long survived, for the sea to the west of that coast was in the early Muḥammadan time called the sea of Lâr, and the language spoken on its shores was called by Mas'ûdi, Lâri (Yule's *Marco Polo*, vol. II, p. 353, n.). Ptolemy's Larikê was a political rather than a geographical division and as such comprehended in addition to the part of the sea-board to which the name was strictly applicable, an extensive inland territory, rich in agricultural and commercial products, and possessing large and flourishing towns, acquired no doubt by military conquest.

B a r y g a z a, now Bharôch, which is still a large city, situated about 30 miles from the sea on the north side of the river Narmadâ, and on an elevated mound supposed to be artificial, raised about 80 feet above the level of the sea. The place is repeatedly mentioned in the *Periplûs*. At the time when that work was written, it was the greatest seat of commerce in Western India, and the capital of a powerful and flourishing State. The etymology of the name is thus explained by Dr John Wilson (*Indian Castes*, vol. II, p. 113): "The Bhârgavas derive their designation from Bhârgava, the adjective form of Bhṛigu, the name of one of the ancient Ṛishis. Their chief habitat is the district of Bharôch, which must have got its name from a colony of the school of Bhṛigu having been early established in this Kshêtra, probably granted to them by some conqueror of the district. In the name Barugaza given to it by Ptolemy, we have a

Greek corruption of Bhṛigukshêtra (the territory of Bhṛigu) or Bhṛigukachha, 'the tongue-land' of Bhṛigu." The illiterate Guǰarâtis pronounce Bhṛigukshêtra as Bargacha, and hence the Greek form of the name.

Agrinagara:—This means 'the town of the Agri.' Yule places it at Âgar, about 30 miles to the N.E. of Ujjain.

Siripalla:—A place of this name (spelt Sêripala) has already been mentioned as situated where the Namados (Narmadâ) changes the direction of its course. Lassen therefore locates it in the neighbourhood of Haûmp, where the river turns to southward.

Bammogoura:—In Yule's map this is identified with Pavangarh, a hill to the north of the Narmadâ.

Sazantion:—This may perhaps be identical with Sajintra, a small place some distance north from the upper extremity of the Bay of Khambât.

Zêrogerei:—This is referred by Yule to Dhâr, a place S.W. of Ozênê, about one degree.

Ozênê:—This is a transliteration of Ujjayinî, the Sanskrit name of the old and famous city of Avanti, still called Ujjain. It was the capital of the celebrated Vikramâditya, who having expelled the Skythians and thereafter established his power over the greater part of India, restored the Hindû monarchy to its ancient splendour. It was one of the seven sacred cities of the Hindûs, and the first meridian of their astronomers. We learn from the *Mahâvaṅśa* that Aśôka, the grandson of Chandragupta (Sandrakottos) was sent by his father the king of

Pâṭaliputra (Patna) to be the viceroy of Ujjain, and also that about two centuries later (B.C. 95) a certain Buddhist high priest took with him 40,000 disciples from the Dakkhinagiri temple at Ujjain to Ceylon to assist there in laying the foundation stone of the great Dâgaba at Anurâdhapura. Half a century later than this is the date of the expulsion of the Skythians by Vikramâditya, which forms the æra in Indian Chronology called *Saṁvat* (57 B.C.). The next notice of Ujjain is to be found in the *Periplûs* where we read (Sec. 48) "Eastward from Barygaza is a city called Ozênê, formerly the capital where the king resided. From this place is brought down to Barygaza every commodity for local consumption or export to other parts of India, onyx-stones, porcelain, fine muslins, mallow-tinted cottons and the ordinary kinds in great quantities. It imports from the upper country through Proklaïs for transport to the coast, spikenard, kostos and bdellium." From this we see that about a century and a half after Vikramâditya's æra Ujjain was still a flourishing city, though it had lost something of its former importance and dignity from being no longer the residence of the sovereign. The ancient city no longer exists, but its ruins can be traced at the distance of a mile from its modern successor. Ptolemy tells us that in his time Ozênê was the capital of Tiastanês. This name transliterates Chashṭâna, one which is found on coins and the cave temple inscriptions of Western India. This prince appears probably to have been the founder of the Kshatrapa dynasty of Western India (see *Ind. Alt.*, vol. III, p. 171).

Minagara is mentioned in the *Periplûs*, where its name is more correctly given as Minnagar, *i.e.*, 'the city of the Min' or Skythians. This Minagara appears to have been the residence of the sovereign of Barygaza. Ptolemy places it about 2 degrees to the S.W. of Ozênê. Yule remarks that it is probably the Manekir of Mas'ûdi, who describes it as a city lying far inland and among mountains. Benfey doubts whether there were in reality two cities of this name, and thinks that the double mention of Minnagar in the *Periplûs* is quite compatible with the supposition that there was but one city so called. (*Indien*, p. 91).

Tiatoura:—This would transliterate with Chittur, which, however, lies too far north for the position assigned to Tiatoura. Yule suggests, but doubtingly, its identity with Chandur. This however lies much too far south.

Nasika has preserved its name unaltered to the present day, distant 116 miles N.E. from Bombay. Its latitude is 20° N., but in Ptolemy only 17°. It was one of the most sacred seats of Brâhmaṇism. It has also important Buddhistic remains, being noted for a group of rock-temples. The word *nâsikâ* means in Sanskrit 'nose.'

64. The parts farther inland are possessed by the Poulindai Agriophagoi, and beyond them are the Khatriaioi, to whom belong these cities, lying some east and some west of the Indus :—

Nigranigramma.....	124°	28° 15′
Antakhara	122°	27° 20′
Soudasanna.....	123°	26° 50′

Syrnisika	121°	26° 30′
Patistama	121°	25°
Tisapatinga	123°	24° 20′

The 'Poulindai' Agriophagoi are described as occupying the parts northward of those just mentioned. Pulinda is a name applied in Hindû works to a variety of aboriginal races. Agriophagoi is a Greek epithet, and indicates that the Pulinda was a tribe that subsisted on raw flesh and roots or wild fruits. In Yule's map they are located to the N. E. of the Raṇ of Kachh, lying between the Khatriaioi in the north and Larikê in the south. Another tribe of this name lived about the central parts of the Vindhyas.

Khatriaioi:—According to Greek writers the people that held the territory comprised between the Hydraôtês (Râvî) and the Hyphasis (Biyas) were the Kathaioi, whose capital was Sangala. The *Mahâbhârata*, and the Pâli Buddhist works speak of Sangala as the capital of the Madras, a powerful people often called also the Bâhîkas. Lassen, in order to explain the substitution of name, supposes that the mixture of the Madras with the inferior castes had led them to assume the name of Khattrias (Kshatriya, the warrior caste), in token of their degradation, but this is by no means probable. The name is still found spread over an immense area in the N. W. of India, from the Hindû-kôh as far as Bengal, and from Nêpâl to Gujarât, under forms slightly variant. Kathîs, Kattis, Kathîas, Kattris, Khatris, Khetars, Kattaour, Kattair, Kattaks, and others.

One of these tribes, the Kâṭhis, issuing from the lower parts of the Panjâb, established themselves in Surâshṭra, and gave the name of Kâṭhiâvad to the great peninsula of Gujarât. (*Étude*, p. 104).

The six towns mentioned in section 64 can none of them be identified.

65. But again, the country between Mount Sardônyx and Mount Bêttigô belongs to the Tabasoi, a great race, while the country beyond them as far as the Vindhya range, along the eastern bank of the Namados, belongs to the Prapiôtai, who include the Rhamnai, and whose towns are these :—

Kognabanda.....	120° 15′	23°
Ozoabis	120° 30′	23° 40′
Ostha.....	122° 30′	23° 30′
Kôsa, where are diamonds	121° 20′	22° 30′

Tabasoi is not an ethnic name, but designates a community of religious ascetics, and represents the Sanskrit *Tâpasâs*, from *tapas* 'heat' or 'religious austerity.' The haunts of these devotees may be assigned to the valley of the Tâptî or Tâpî (the Nanagouna of Ptolemy) to the south of the more western portion of the Vindhyas that produced the sardonyx.

Prapiôtai:—Lassen locates this people, including the subject race called the Rhamnai, in the upper half of the Narmadâ valley. From the circumstance that diamonds were found near Kôsa, one of their towns, he infers that their territory extended as far as the Upper Varadâ, where diamond mines were known to have existed. Kôsa was probably situated in the

neighbourhood of Baital, north of the sources of the Tâptî and the Varadâ.

Rhamnai:—The name of this people is one of the oldest in Indian ethnography. Their early seat was in the land of the Ôreîtai and Arabitai beyond the Indus, where they had a capital called Rhambakia. As they were connected by race with the Brahui, whose speech must be considered as belonging to the Dekhan group of languages, we have here, says Lassen (*Ind. Alt.* vol. III, p. 174), a fresh proof confirming the view that before the arrival of the Aryans all India, together with Gedrôsia, was inhabited by the tribes of the same widely diffused aboriginal race, and that the Rhamnai, who had at one time been settled in Gedrôsia, had wandered thence as far as the Vindhya mountains. Yule conjectures that the Rhamnai may perhaps be associated with Râmagiri, now Râmtek, a famous holy place near Nâgpûr. The towns of the Prapiôtai, four in number, cannot with certainty be identified.

66. About the Nanagouna are the Phyllitai and the Bêttigoi, including the Kandaloi along the country of the Phyllitai and the river, and the Ambastai along the country of the Bêttigoi and the mountain range, and the following towns:—

67. Agara	129° 20′	25°
Adeisathra	128° 30′	24° 30′
Soara	124° 20′	24°
Nygdosora	125°	23°
Anara	122° 30′	22° 20′.

The Phyllitai occupied the banks of the Tâptî lower down than the Rhamnai, and extended northward to the Sâtpura range. Lassen considers their name as a transliteration of Bhilla, with an appended Greek termination. The Bhîlls are a well-known wild tribe spread to this day not only on the Upper Narmadâ and the parts of the Vindhya chain adjoining, but wider still towards the south and west. In Ptolemy's time their seats appear to have been further to the east than at present. Yule thinks it not impossible that the Phyllitai and the Drilophyllitai may represent the Puḷinda, a name which, as has already been stated, is given in Hindû works to a variety of aboriginal races. According to Caldwell (*Drav. Gram.*, p. 464) the name *Bhilla* (*vil*, *bil*) means 'a bow.'

Bêttigoi is the correct reading, and if the name denotes, as it is natural to suppose, the people living near Mount Bêttigô, then Ptolemy has altogether displaced them, for their real seats were in the country between the Koimbatur Gap and the southern extremity of the Peninsula.

Kandaloi:—Lassen suspects that the reading here should be Gondaloi, as the Gonds (who are nearly identical with the Khands) are an ancient race that belonged to the parts here indicated. Yule, however, points out that Kuntaladêśa and the Kantalas appear frequently in lists and in inscriptions. The country was that, he adds, of which Kalyâṇ was in after days the capital (Elliot, *Jour. R. As. S.* vol. IV, p. 3).

Ambastai:—These represent the Ambashṭha

of Sanskrit, a people mentioned in the Epics, where it is said that they fought with the club for a weapon. In the *Laws of Manu* the name is applied to one of the mixed castes which practised the healing art. A people called Ambautai are mentioned by our author as settled in the east of the country of the Paropanisadai. Lassen thinks these may have been connected in some way with the Ambastai. Their locality is quite uncertain. In Yule's map they are placed doubtfully to the south of the sources of the Mahânadî of Orissa.

Of the four towns, Agara, Soara, Nygdosora and Anara, in section 67, nothing is known.

Adeisathra:—It would appear that there were two places in Ancient India which bore the name of Ahichhattra, the one called by Ptolemy Adisdara (for Adisadra), and the other as here, Adeisathra. Adisdara, as has been already shown, was a city of Rohilkhand. Adeisathra, on the other hand, lay near to the centre of India. Yule quotes authorities which seem to place it, he says, near the Vindhyas or the Narmadâ. He refers also to an inscription which mentions it as on the Sindhu River, which he takes to be either the Kâli-sindh of Mâlwâ, or the Little Kâli-sindh further west, which seems to be the Sindhu of the *Mêghadûta*. Ptolemy, singularly enough, disjoins Adeisathra from the territory of the Adeisathroi, where we would naturally expect him to place it. Probably, as Yule remarks, he took the name of the people from some Pauranik ethnic list and the name of the city from a traveller's route, and thus failed to make them fall into proper relation to each other.

68. Between Mount Bêttigô and Adeisathros are the Sôrai nomads, with these towns:—

Sangamarta	133°	21°
Sôra, the capital of Arkatos ..	130°	21°

69. Again to the east of the Vindhya range is the territory of the (Biolingai or) Bôlingai, with these towns:—

Stagabaza or Bastagaza	133°	28° 30′
Bardaôtis	137° 30′	28° 30′

Sôra designates the northern portion of the Tamiḷ country. The name in Sanskrit is Chôla, in Telugu Choḷa, but in Tamiḷ Sôṛa or Chôṛa. Sôṛa is called the capital of Arkatos. This must be an error, for there can be little doubt that Arkatos was not the name of a prince, but of a city, the Ârkâḍ of the present day. This is so suitably situated, Caldwell remarks, as to suggest at once this identification, apart even from the close agreement as far as the sound is concerned. The name is properly Âr-kâḍ, and means 'the six forests.' The Hindûs of the place regard it as an ancient city, although it is not mentioned by name in the *Purâṇas* (*Drav. Gram.*, Introd. pp. 95, 96). There is a tradition that the inhabitants of that part of the country between Madras and the Ghâṭs including Ârkâḍ as its centre were Kuṛumbars, or wandering shepherds, for several centuries after the Christian æra. Cunningham takes Arkatos to be the name of a prince, and inclines to identify Sôra with Zora or Jora (the Jorampur of the maps) an old town lying immediately under the walls of

Karnul. The Sôrai he takes to be the Suari (*Geog.* p. 547).

B i o l i n g a i or B ô l i n g a i:—Ptolemy has transplanted this people from their proper seats, which lay where the Ārâvalî range slopes westward towards the Indus, and placed them to the east of the Vindhyas. He has left us however the means of correcting his error, for he makes them next neighbours to the Pôrvaroi, whose position can be fixed with some certainty. Pliny (lib. VI, c. xx) mentions the Bolingae and locates them properly. According to Pâṇini, B h a u l i ṅ g i was the seat of one of the branches of the great tribe of the Śalvas or Śâlvas.

S t a g a b a z a:—Yule conjectures this may be Bhôjapûr, which he says was a site of extreme antiquity, on the upper stream of the Bêtwâ, where are remains of vast hydraulic works ascribed to a king Bhôja (*J. A. S. Beng.* vol. XVI, p. 740). To account for the first part of the name *staga* he suggests the query: Taṭaka-Bhôja, the 'tank' or 'lake' of Bhoja?

B a r d a ô t i s:—This may be taken to represent the Sanskrit Bhadrâvatî, a name, says Yule, famed in the Epic legends, and claimed by many cities. Cunningham, he adds, is disposed to identify it with the remarkable remains (pre-Ptolemaic) discovered at Bharâod, west of Rêwâ.

70. Beyond these is the country of the P ô r o u a r o i with these towns:—

Bridama	134° 30′	27° 30′
Tholoubana	136° 20′	27°
Malaita	136° 30′	25° 50′

71. Beyond these as far as the Ouxentos range are the A d e i s a t h r o i with these towns:—

Maleiba	140°	27° 20′
Aspathis	138° 30′	25° 20′
Panassa	137° 40′	24° 30′
Sagêda, the Metropolis	133°	23° 30′
Balantipyrgon	136° 30′	23° 30′

P ô r o u a r o i (P ô r v a r o i):—This is the famous race of the Pauravas, which after the time of Alexander was all predominant in Râjasthâna under the name of the Pramâras. The race figures conspicuously both in the legendary and real history of the North of India. It is mentioned in the hymns of the *Veda*, and frequently in the *Mahâbhârata*, where the first kings of the Lunar race are represented as being Pauravas that reigned over the realms included between the Upper Ganges and the Yamunâ. The later legends are silent concerning them, but they appear again in real history and with fresh distinction, for the gallant Pôros, who so intrepidly contended against Alexander on the banks of the Hydaspês, was the chief of a branch of the Paurava whose dominions lay to the west of that river, and that other Pôros who went on an embassy to Augustus and boasted himself to be the lord paramount of 600 vassal kings was also of the same exalted lineage. Even at the present day some of the noblest houses reigning in different parts of Râjasthân claim to be descended from the Pauravas, while the songs of the national bards still extol the vanished grandeur and the

power and glory of this ancient race. Saint-Martin locates the Pôrouaroi of the text in the west of Upper India, in the very heart of the Râjpût country, though the table would lead us to place them much farther to the east. In the position indicated the name even of the Pôrouaroi is found almost without alteration in the Purvar of the inscriptions, in the Pôravars of the Jain clans, as much as in the designation spread everywhere of Povars and of Pouârs, forms variously altered, but still closely approaching the classic Paurava (*Étude*, pp. 357 sqq.).

The names of the three towns assigned to the Pôrvaroi,—B r i d a m a, T h o l o u b a n a and M a l a i t a designate obscure localities, and their position can but be conjectured. Saint-Martin suggests that the first may be Dildana, the second Doblana, and the third Plaita, all being places in Râjputâna. Yule, however, for Bridama proposes Bardâwaḍ, a place in a straight line from Indôr to Nimach, and for M a l a i t a,—Maltaun; this place is in the British territory of Sagâr and Narmadâ, on the south declivity of the Naral Pass.

A d e i s a t h r o i:—It has already been pointed out that as Ptolemy has assigned the sources of the Khabêris (the Kâvêrî) to his Mount Adeisathros, we must identify that range with the section of the Western Ghâṭs which extends immediately northward from the Koimbatur Gap. He places Adeisathros however in the central parts of India, and here accordingly we must look for the cities of the eponymous people. Five are mentioned, but S a g ê d a only, which was the metropolis, can be identified with some certainty. The name

represents the Sâkêta of Sanskrit. Sâkêta was another name for Ayôdhyâ on the Sarayû, a city of vast extent and famous as the capital of the kings of the Solar race and as the residence for some years of Śâkyamuni, the founder of Buddhism. The Sagêda of our text was however a different city, identified by Dr. F. Hall with Têwar, near Jabalpûr, the capital of the Chêdi, a people of Bandêlakhand renowned in Epic poetry. Cunningham thinks it highly probable that the old form of the name of this people was Chaṅgêdi and may be preserved in the Sagêda of Ptolemy and in the Chi-ki-tho of Hiuen Tsiang in Central India, near the Narmadâ. He says:—"The identification which I have proposed of Ptolemy's Sagêda Metropolis with Chêdi appears to me to be almost certain. In the first place, Sagêda is the capital of the Adeisathroi which I take to be a Greek rendering of Hayakshêtra or the country of the Hayas or Haihayas. It adjoins the country of the Bêttigoi, whom I would identify with the people of Vakâṭaka, whose capital was Bhândak. One of the towns in their country, situated near the upper course of the Sôn, is named Balantipyrgon, or Balampyrgon. This I take to be the famous Fort of Bândogaṛh, which we know formed part of the Chêdi dominions. To the north-east was Panassa, which most probably preserves the name of some town on the Parṇâsâ or Banâs River, a tributary which joins the Sôn to the north-east of Bândogaṛh. To the north of the Adeisathroi, Ptolemy places the Pôrouaroi or Parihârs, in their towns named Tholoubana, Bridama, and Malaita. The

first I would identify with Boriban (Bahuriband) by reading Oöloubana or Voloubana. The second must be Bilhâri; and the last may be Lameta, which gives its name to the Ghâṭ on the Narmadâ, opposite Têwar, and may thus stand for Tripura itself. All these identifications hold so well together, and mutually support each other, that I have little doubt of their correctness." *Archæolog. Surv. of Ind.* vol. IX, pp. 55–57.

P a n a s s a:—This in Yule's map is doubtfully placed at Panna, a decaying town in Bandelakhand with diamond mines in the neighbourhood. In the same map Baland is suggested as the representative of Balantipyrgon.

72. Farther east than the Adeisathroi towards the Ganges are the M a n d a l a i with this city:—

Asthagoura	142°	25°

73. And on the river itself these towns:—

Sambalaka.....	141°	29° 30′
Sigalla.....	142°	28°
Palimbothra, the Royal residence	143°	27°
Tamalitês	144° 30′	26° 30′
Oreophanta.....	146° 30′	24° 30′

74. In like manner the parts under Mount Bêttigô are occupied by the B r a k h m a n a i M a g o i as far as the Batai with this city:—

Brakhmê	128°	19°

75. The parts under the range of Adeisathros as far as the Arouraioi are occupied by the B a d i a m a i o i with this city:—

Tathilba.....	134°	18° 50′

76. The parts under the Ouxentos range are occupied by the D r i l o p h y l l i t a i, with these cities:—

Sibrion.....	139°	22° 20′
Opotoura	137° 30′	21° 40′
Ozoana	138° 15′	20° 30′

M a n d a l a i:—The territory of the Mandalai lay in that upland region where the Sôn and the Narmadâ have their sources. Here a town situated on the latter river still bears the name Mandalâ. It is about 50 miles distant from Jabalpûr to the south-east, and is of some historic note. Ptolemy has, however, assigned to the Mandalai dominions far beyond their proper limits, for to judge from the towns which he gives them they must have occupied all the right bank of the Ganges from its confluence with the Jamnâ downwards to the Bay of Bengal. But that this is improbable may be inferred from the fact that Palimbothra (Pâṭnâ) which the table makes to be one of their cities, did not belong to them, but was the capital of Prasiakê which, as has already been remarked, is pushed far too high up the river. Tamalitês, moreover, which has been satisfactorily identified with Tamluk, a river port about 35 miles S. W. from Calcutta possessed, according to Wilford, a large territory of its own. The table also places it only half a degree more to the southward than Palimbothra, while in reality it is more than 3 or 4 deg. Cunningham inclines to identify with the Mandalai the Mundas of Chutia Nâgpur, whose language and country, he says, are called

Mundala, and also with the Malli of Pliny (lib. VI. c. xxi.)—*Anc. Geog. of Ind.*, pp. 508, 509.

Sambalaka:—A city of the same name attributed to Prasiakê (sec. 53) has been already identified with Sambhal in Rohilkhand. The Sambalaka of the Mandalai may perhaps be Sambhalpur on the Upper Mahânadi, the capital of a district which produces the finest diamonds in the world.

Sigalla:—This name has a suspicious likeness to Sagala, the name of the city to the west of Lâhor, which was besieged and taken by Alexander, and which Ptolemy has erroneously placed in Prasiakê (sec. 53).

Palimbothra:—The more usual form of the name is Palibothra, a transcription of Pâliputra, the spoken form of Pâṭaliputra, the ancient capital of Magadha, and a name still frequently applied to the city of Pâṭnâ which is its modern representative. In the times of Chandragupta (the Sandrokottos of the Greeks) and the kings of his dynasty, Palibothra was the capital of a great empire which extended from the mouths of the Ganges to the regions beyond the Indus. Remains of the wooden wall by which the city, as we learn from Strabo, was defended, were discovered a few years ago in Pâṭnâ (by workmen engaged in digging a tank) at a depth of from 12 to 15 feet below the surface of the ground. Palimbothra, as we have noticed, did not belong to the Mandalai but to the Prasioi.

Tamalitês represents the Sanskrit Tâmraliptî, the modern Tamluk, a town lying in a low

and damp situation on a broad reach or bay of the Rûpnârâyaṇ River, 12 miles above its junction with the Hughlî mouth of the Ganges. The Pâli form of the name was Tâmalitti, and this accounts for the form in Greek. Pliny mentions a people called Taluctae belonging to this part of India, and the similarity of the name leaves little doubt of their identity with the people whose capital was Tamluk. This place, in ancient times, was the great emporium of the trade between the Ganges and Ceylon. We have already pointed out how wide Ptolemy was of the mark in fixing its situation relatively to Palimbothra.

Brakhmanai Magoi:—Mr. J. Campbell has suggested to me that by Brakhmanai Magoi may be meant 'sons of the Brâhmaṇs,' that is, Canarese Brâhmaṇs, whose forefathers married women of the country, the word *magoi* representing the Canarese *maga*, 'a son.' The term, he says, is still in common use, added to the name of castes, as Haiga-Makalu (*makalu*—plural of *maga*) *i.e.* Haiga Brâhmaṇs. Lassen supposed that Ptolemy, by adding *Magoi* to the name of these Brâhmaṇs, meant to imply either that they were a colony of Persian priests settled in India, or that they were Brâhmaṇs who had adopted the tenets of the Magi, and expresses his surprise that Ptolemy should have been led into making such an unwarrantable supposition. The country occupied by these Brâhmaṇs was about the upper Kâvêrî, and extended from Mount Bêttigô eastward as far as the Batai.

Brakhmê:—"Can this," asks Caldwell, "be Brahmadêśam, an ancient town on the Tâmra-

parṇî, not far from the foot of the Podigei Mount (Mt. Bêttigô) which I have found referred to in several ancient inscription ?"

B a d i a m a i o i :—There is in the district of Belgaum a town and hill-fort on the route from Kalâdgi to Balâri, not far from the Mâlprabhâ, a tributary of the Kṛishṇâ, called Badâmi, and here we may locate the Bâdiamaioi. T a t h i l b a, their capital, cannot be recognized.

D r i l o p h y l l i t a i :—These are placed by Ptolemy at the foot of the Ouxentos, and probably had their seats to the south-west of that range Their name indicates them to have beer a branch of the Phyllitai, the Bhills, or perhaps Pulindas. Lassen would explain the first part of their name from the Sanskrit *dṛiḍha* (strong) by the change of the *ḍh* into the liquid. O z o a n a, one of their three towns is, perhaps, Seoni, a place about 60 miles N. E. from Nâgpur.

77. Further east than these towards the Ganges are the K o k k o n a g a i with this city :—

Dôsara	142° 30′	22° 30′

78. And on the river farther west :—

Kartinaga.....	146°	23°
Kartasina.....	146°	21° 40′

79. Under the Maisôlai the S a l a k ê n o i towards the Oroudian (or Arouraian) Mountains with these cities :—

Bênagouron	140°	20° 15′
Kastra	138°	19° 30′
Magaris	137° 30′	18° 20′

80. Towards the Ganges River the S a b a r a i, in whose country the diamond is found in great abundance, their towns are :—

Tasopion .....140° 30′ 22°
Karikardama .....141° 20° 15′

81. All the country about the mouths of the Ganges is occupied by the G a n g a r i d a i with this city :—

Gangê, the Royal residence .....146° 19° 15′

K o k k o n a g a i :—Lassen locates this tribe in Chutia Nâgpur, identifying Dôsara with Doesâ in the hill country, between the upper courses of the Vaitaraṇî and Suvarṇarêkha. He explains their name to mean the people of the mountains where the *kôka* grows,—*kôka* being the name of a kind of palm-tree. Yule suggests that the name may represent the Sanskrit Kâkamukha, which means 'crow-faced,' and was the name of a mythical race. He places them on the Upper Mahânadî and farther west than Lassen. The table gives them two towns near the Ganges.

K a r t i n a g a and K a r t a s i n a :—The former, Yule thinks, may be Karṇagaṛh near Bhâgalpur, perhaps an ancient site, regarding which he refers to the *Jour. R. As. Soc.* vol. XVIII, p. 395; Kartasina he takes to be Karṇasôṇagaṛh, another ancient site near Berhampur (*J.R.A.S.* N.S., vol. VI, p. 248 and *J. As. S. Beng.* vol. XXII, p. 281).

S a l a k ê n o i :—This people may be located to the west of the Gôdâvarî, inland on the north-western borders of Maisôlia. Their name, Lassen

thought (*Ind. Alt.*, vol. III, p. 176) might be connected with the Sanskrit word *Sâla*, the Sâl tree. Yule suggests that it may represent the Sanskrit Saurikîrṇa. None of their towns can be recognized.

S a b a r a i:—The Sabarai of Ptolemy Cunningham takes to be the Suari of Pliny, and he would identify both with the aboriginal Śavaras or Suars, a wild race who live in the woods and jungles without any fixed habitations, and whose country extended as far southward as the Pennâr River. These Śavaras or Suars are only a single branch of a widely spread race found in large numbers to the S.W. of Gwalior and Narwar and S. Râjputâna, where they are known as Surrius. Yule places them farther north in D ô s a r ê n ê, towards the territory of Sambhalpur, which, as we have already remarked, produced the finest diamonds in the world. Their towns have not been identified.

G a n g a r i d a i:—This great people occupied all the country about the mouths of the Ganges. Their capital was G a n g ê, described in the *Periplûs* as an important seat of commerce on the Ganges. They are mentioned by Virgil (*Geogr.* III, l. 27), by Valerius Flaccus (*Argon.* lib. VI, l. 66), and by Curtius (lib. IX, c. ii) who places them along with the Pharrasii (Prasii) on the eastern bank of the Ganges. They are called by Pliny (lib. VI, c. lxv) the Gangaridae Calingae, and placed by him at the furthest extremity of the Ganges region, as is indicated by the expression *gens novissima*, which he applies to them. They must have been a powerful people, to judge from the military force

which Pliny reports them to have maintained, and their territory could scarcely have been restricted to the marshy jungles at the mouth of the river now known as the Sundarbans, but must have comprised a considerable portion of the province of Bengal. This is the view taken by Saint-Martin. Bengal, he says, represents, at least in a general way, the country of the Gangaridae, and the city which Pliny speaks of as their capital, Parthalis can only be Vardhana, a place which flourished in ancient times, and is now known as Bardhwân. The name of the Gangaridai has nothing in Sanskrit to correspond with it, nor can it be a word, as Lassen supposed, of purely Greek formation, for the people were mentioned under this name to Alexander by one of the princes in the North-west of India. The synonymous term which Sanskrit fails to supply is found among the aboriginal tribes belonging to the region occupied by the Gangaridai, the name being preserved almost identically in that of the Goṅghrîs of S. Bahâr, with whom were connected the Gaṅgayîs of North-western, and the Gaṅgrâr of Eastern Bengal, these designations being but variations of the name which was originally common to them all.

G a n g ê :—Various sites have been proposed for Gangê. Heeren placed it near Duliapur, a village about 40 miles S. E. of Calcutta on a branch of the Isamatî River; Wilford at the confluence of the Ganges and Brahmaputra, where, he says, there was a town called in Sanskrit Hastimalla, and in the spoken dialect Hâthimalla, from elephants being picquetted there; Murray at

Chittagong; Taylor on the site of the ancient Hindu Capital of Baṅga (Bengal) which lies in the neighbourhood of Soṇargâon (Suvarṇagrâma), a place 12 miles to the S. E. of Ḍhakka; Cunningham at Jêsor; and others further west, near Calcutta, or about 30 miles higher up the Hughlî, somewhere near Chinsurâ. Another Gangê is mentioned by Artemidoros above or to the N. W. of Palibothra, and this Wilford identifies with Prayâg,, *i.e.*, Allahâbâd, but Groskurd with Anupshahr.

Ptolemy now leaves the Gangetic regions and describes the inland parts of the territories along the Western Coast of the Peninsula.

82. In the parts of Ariakê which still remain to be described are the following inland cities and villages: to the west of the Bênda these cities:—

Malippala	119° 30′	20° 15′
Sarisabis	119° 30′	20°
Tagara	118°	19° 20′
Baithana (the royal seat of [Siro] Ptolemaios or Polemaios)	117°	18° 30′
Deopali or Deopala	115° 40′	17° 50′
Gamaliba	115° 15′	17° 20′
Omênogara	114°	16° 20′

83. Between the Bênda and Pseudostomos:

Nagarouris (or Nagarouraris)	120°	20° 15′
Tabasô	121° 30′	20° 40′
Indê	123°	20° 45′
Tiripangalida	221° 15′	19° 40′

Hippokoura, the royal seat of Baleokouros	119° 45′	19° 10′
Soubouttou	120° 15′	19° 10′
Sirimalaga	119° 20′	18° 30′
Kalligeris	118°	18°
Modogoulla	119°	18°
Petirgala	117° 45′	17° 15′
Banaouasei	116°	16° 45′

Seven cities are enumerated in Ariakê, as lying to the west of the Bênda, and regarding four of these, Malippala, Sarisabis, Gamaliba and Omênogara, nothing is known. The *Periplûs* (sec. 51) notices Tagara and Baithana in a passage which may be quoted: "In Dakhinabades itself there are two very important seats of commerce, Paithana towards the south of Barygaza, from which it is distant a twenty days' journey, and eastward from this about a ten days' journey is another very large city, Tagara. From these marts goods are transported on waggons to Barygaza through difficult regions that have no road worth calling such. From Paithana great quantities of onyx-stones and from Tagara large supplies of common cotton-cloth, muslins of all kinds, mallow-tinted cottons and various other articles of local production imported into it from the maritime districts."

Baithana is the Paithana of the above extract, and the Paiṭhân of the present day, a town of Haidarâbâd, or the territory of the Nizam, on the left bank of the river Gôdâvarî, in latitude 19° 29′ or about a degree further north than it is placed by Ptolemy. Paithana is the Prâkrit form

of the Sanskrit Pratishṭhâna, the name of the capital of Śâlivâhana. Ptolemy calls it the capital of Siroptolemaios or Siropolemaios, a name which represents the Sanskrit Śrî-Pulômâvit, the Puḷumâyi of the Nasik Cave and Amarâvati Stûpa Inscriptions, a king of the great Andhra dynasty.

Tagara:—The name is found in inscriptions under the form Tagarapura (*J.R.A.S.* vol. IV, p. 34). Ptolemy places it to the north-east of Baithana and the *Periplûs*, as we see from the extract, to the east of it at the distance of a ten days' journey. Wilford, Vincent, Mannert, Ritter and others take it to be Dêvagaḍh, now Daulatâbâd, which was the seat of a sovereign even in 1293, and is situated not far from Êlura, so famous for its excavated temples. But if Baithana be Paiṭhan, Tagara cannot be Dêvagaḍh, unless the distance is wrongly given. There is, moreover, nothing to show that Dêvagaḍh was connected with the Tagarapura of the inscriptions. Paṇḍit Bhagvânlâl identified Tagara with Junnar, a place of considerable importance, situated to the north of Pûṇâ. He pointed out that the Sanskrit name of Tagara was Trigiri a compound meaning 'three hills,' and that as Junnar stood on a high site between three hills this identification was probably correct. Junnar however lies to the westward of Paiṭhan. Yule places Tagara at Kulburga, which lies to the south-east of Paiṭhan, at a distance of about 150 miles, which would fairly represent a ten days' journey, the distance given in the *Periplûs*. Grant Duff would identify it with a place near Bhîr on the Gôdâvarî, and Fleet with Kolhâpur. The Silahâra

princes or chiefs who formed three distinct branches of a dynasty that ruled over two parts of the Koṅkaṇ and the country about Kolhâpur style themselves, 'The Lords of the excellent city of Tagara.' If, says Prof. Bhaṇdârkar, the name of Tagara has undergone corruption, it would take the form, according to the laws of Prâkrit speech, of Târur or Têrur, and he therefore asks 'can it be the modern Dârur or Dhârur in the Nizam's dominions, 25 miles east of Grant Duff's Bhîr, and 70 miles S.E. of Paiṭhan?' (see Muller's *Geog. Græc. Minor.* vol. I, p. 294, n.; Elphinstone's *History of India*, p. 223; Burgess, *Arch. Surv. W. Ind.* vol. III, p. 54; and *Bombay Gazetteer*, vol. XIII, pt. ii, p. 423, n.). Mr. Campbell is of opinion that the maritime districts from which local products were brought to Tagara and thence exported to Barygaza, lay on the coast of Bengal, and not on the Koṅkaṇ coast, from which there was easy transit by sea to the great northern emporium in the Gulf of Khambât, while the transit by land through Tagara could not be accomplished without encountering the most formidable obstacles.

Deopali:—This name means 'the city of God,' and Deopali may therefore perhaps be Dêvagaḍh, the two names having the same meaning.

Tabasô:—This would seem to be a city of the Tabasoi, already mentioned as a large community, of Brâhmaṇ ascetics.

Hippokoura:—A town of this name has already been mentioned as a seaport to the south of Simylla. This Hippokoura lay inland, and was

the capital of the southern parts of Ariakês, as Paithana was the capital of the northern. Its position is uncertain. Yule places it doubtfully at Kalyâṇ, a place about half a degree to the west of Bidar, and at some distance south from the river Mañjirâ. Ptolemy calls it the capital of Baleokouros. Bhândârkar conjectures this to have been the Viḷivâyakura, a name found upon two other Andhra coins discovered at Kôlhâpur. There is no other clue to its identification, but see Lassen, *Ind. Alt.* vol. III, pp. 179, 185.

S i r i m a l a g a may perhaps be Mâlkhêḍ, a town in Haidarâbâd, situated on a tributary of the Bhîmâ, in lat. 17° 8′ and long. 77° 12′. The first part of the word *Siri* probably represents the Sanskrit honorific prefix *śrî*.

K a l l i g e r i s :—Perhaps Kaṇhagiri a place about ½ a degree to the south of Mûdgal.

M o d o g o u l l a :—There can be little doubt that this is Mûdgal, a town in the Haidarâbâd districts,—lat. 16° 2′, long. 76° 26′,—N. W. from Balâri. P e t i r g a l a cannot be identified.

B a n a o u a s e i :—This place is mentioned in the *Mahâvaṅso*, in the Pâli form Wanawâsi, by which a city or district is designated. Banaouasei must beyond doubt have been the capital of this country, and is identical with the modern Banavâsî, situated on the upper Varadâ, a tributary of the Tuṅgabhadrâ. Saint-Martin thinks that it was the city visited by Hiuen Tsiang, and called by him Kon-kin-na-pu-lo, *i.e.*, Koṅkaṇapura; Cunningham is of opinion that both the bearing and the distance point to Ânagundi, but Dr. Burgess suggests Kôkanûr for Kôn-kin-na-pu-lo.

84. The inland cities of the P i r a t e s are these :—

Olokhoira	114°	15°
Mousopallê, the metropolis	115° 30′	15° 45′

85. Inland cities of L i m y r i k ê, to the west of the Pseudostomos are these :—

Naroulla	117° 45′	15° 50′
Kouba	117°	15°
Paloura	117° 51′	14° 40′

86. Between the Pseudostomos and the Baris, these cities :—

Pasagê	124° 50′	19° 50′
Mastanour	121° 30′	18° 40′
Kourellour	119°	17° 30′
Pounnata, where is beryl	121° 20′	17° 30′
Aloê	120° 20′	17°
Karoura, the royal seat of Kêrobothros	119°	16° 20′
Arembour	121°	16° 20′
Bideris	119°	15° 50′
Pantipolis	118°	15° 20′
Adarima	119° 30′	15° 40′
Koreour	120°	15°

87. Inland town of the A ï o i :—

Morounda	121° 20′	14° 20′

The dominion of the sea appears to have satisfied the ambition of the pirates, as they possessed on shore only a narrow strip of territory enclosed between the line of coast and the western declivities of the Ghâṭs. Their capital, M o u s o p a l l ê, Yule places at Miraj, a town near the Kṛishṇâ, but doubtfully. Their other town, O l o k h o i r a,

is probably Khêḍâ, a town in the district of Ratnagiri in lat. 17° 44′ long. 73° 30′. As Khêḍâ is the name of several other places in this part of the country, *Olo*, whatever it may mean, may have been in old times prefixed to this particular Khêḍâ for the sake of distinction.

K o u b a :—This is generally taken to be Goa or Govâ, the capital of the Portuguese possessions in India, and there can be little doubt of the correctness of the identification. The two towns N a r o u l l a and P a l o u r a, which Ptolemy places with Kouba to the west of the Pseudostomos, cannot be identified. To judge from his figures of longitude, Paloura lay 15′ farther east than Kouba, but as he makes the coast run eastward instead of southward, it must be considered to have lain south of Kouba. The name is Tamil, and means, according to Caldwell (*Introd.* p. 104) 'Milk town.' It is remarkable, he observes, how many names of places in Southern India mentioned by Ptolemy end in *οὐρ* or *οὐρα*='a town.' There are 23 such places in all.

P a s a g ê :—According to Yule's map this represents Palsagi, the old name of a place now called Halsi, south-east of Goa, from which it is distant somewhat under a degree.

M a s t a n o u r and K o u r e l l o u r cannot be identified.

P o u n n a t a has not yet been identified, though Ptolemy gives a sort of clue in stating that it produced the beryl. Yule places it in his map near Seringapatam. (See *Ind. Ant.* vol. XII, p. 13).

A l o ê :—This may be Yellapur, a small town in North Canara, in lat. 14° 56′ long. 74° 43′.

K a r o u r a :—"Karoura," says Caldwell, "is mentioned in Tamiḻ traditions as the ancient capital of the Chêra, Kêra, or Kêrala kings, and is generally identified with Karûr, an important town in the Koimbatur district, originally included in the Chêra kingdom. It is situated on the left bank of the river Amarâvatî, a tributary of the Kâvêrî, near a large fort now in ruins. Ptolemy notes that Karoura was the capital of Kêrobothros, *i.e.*, Kêralaputra (Cherapati?) Karûra means 'the black town,' and I consider it identical with Kâragam, and Kaḍâram, names of places which I have frequently found in the Tamiḻ country, and which are evidently the poetical equivalents of Karûr. The meaning of each of the names is the same. Ptolemy's word Karoura represents the Tamiḻ name of the place with perfect accuracy." (*Introd.* pp. 96, 97).

A r e m b o u r :—Lassen compares this name with Oorumparum, but the situation of the place so called (lat. 11° 12′ long 76° 16′) does not suit well the position of Arembour as given by Ptolemy.

B i d e r i s :—Perhaps Erod or Yirodu in the district of Koimbatur (lat. 11° 20′ long. 77° 46′) near the Kâvêrî.

P a n t i p o l i s, according to Yule, represents the obsolete name Pantiyapura, which he places at Hangal, in the Dhârwâḍ district.

M o r o u n d a :—This is the only inland city of the Aïoi named by Ptolemy. It has not been identified.

The concluding tables enumerate the inland towns belonging to the districts lying along the Eastern Coast of the Peninsula.

88. Inland cities of the K a r e o i:—

Mendêla	123°	17° 40′
Sêlour	121° 45′	16° 30′
Tittoua	122°	15° 20′
Mantittour	123°	15° 10′

89. Inland cities of the P a n d i o n o i:—

Tainour	124° 45′	18° 40′
Periṅgkarei	123° 20′	18°
Korindiour	125°	17° 40′
Tangala or Taga	123° 30′	16° 50′
Modoura, the royal city of Pandion	125°	16° 20′
Akour	124° 45′	15° 20′

90. Inland cities of the B a t o i:—

Kalindoia	127° 40′	17° 30′
Bata	126° 30′	17°
Talara	128°	16° 45′

Inland cities of the K a r e o i:—none of the four named in the table can be identified.

P e r i n g k a r e i:—This town has preserved its name almost without change, being now known as Peruṅgari, on the river Vaigaï, about 40 miles lower down its course than Madurâ. With regard to this name, Caldwell remarks that if it had been written Peruṇgkarei it would have been perfectly accurate Tamiḻ, letter for letter. The meaning is 'great shore,' and *perum* 'great' becomes *peruṅg* before *k*, by rule. Ptolemy places a town called T a i n o u r at the distance of less than a degree to the north-east of Peringkarei. The direction would suit Tanjor, but the distance is more than a

degree. Ptolemy has however placed his Pering karei quite in a wrong position with regard to Madurâ.

T a n g a l a or T a g a :—There can be little doubt that this is now represented by Diṇḍugal, an important and flourishing town lying at a distance of 32 miles north by west from Madurâ.

M o d o u r a :—This is now called Madurâ or Madurai—on the banks of the River Vaigai. It was the second capital of the Southern Pâṇḍyas; we have already noticed it in the description of the territory of this people.

B a t a :—This may perhaps be Paṭṭukôṭṭa, a small town not very far inland from the northern end of the Argolic Gulf (Palk's Passage). The other two towns of the Batoi cannot be recognized. As Pudukôṭṭa is the capital of the Tondiman Râja, Lassen has suggested its identity with Bata. It is upwards of 20 miles farther inland than Paṭṭukôṭṭa.

91. Inland cities of the Paralia of the S ô r ê t a i :—

Kaliour	129°	17° 20′
Tennagora	132°	17°
Eikour.....	129°	16° 40′
Orthoura, the royal city of Sôrnagos	130°	16° 20′
Berê.....	130° 20′	16° 15′
Abour	129°	16°
Karmara.....	130° 20′	15° 40′
Magour	130°	15° 15′

92. The inland cities of the Arvarnoi are these:—

Kerauge	133°	16° 15′
Phrourion	132°	15°
Karigê	132° 40′	15°
Poleour	131° 30′	14° 40′
Pikendaka	131° 30′	14°
Iatour	132° 30′	14°
Skopoloura	134° 15′	14° 35′
Ikarta	133° 30′	13° 40′
Malanga, the royal city of Basaronagos	133°	13°
Kandipatna	133° 30′	12° 20′

93. The inland cities of the Maisôloi:—

Kalliga	138°	17°
Bardamana	136° 15′	15° 15′
Koroungkala	135°	15°
Pharytra or Pharetra	134° 20′	13° 20′
Pityndra, the metropolis	135° 20′	12° 30′

Orthoura:—Of the eight inland cities named as belonging to the maritime territory of the Sôrêtai, only two—Abour and the capital, have been identified. Abour is Âmbûrdurg in N. Arkaṭ, lat. 12° 47′, long. 78° 42′. Regarding Orthoura Cunningham says: "Chôḷa is noticed by Ptolemy, whose *Orthura regia Sornati* must be Uṛiûr, the capital of Soranâtha, or the king of the Soringae, that is the Sôras, Chôras or Chôlas. Uṛaiyûr is a few miles south-south-east of Tiruchhinâpalli. The Soringae are most probably the Syrieni of Pliny with their 300 cities, as they occupied the coast

between the Pandae and the Derangae or Dravidians."—*Anc. Geog. of Ind.*, p. 551.

Phrourion:—This is a Greek word signifying 'a garrisoned fort,' and may perhaps be meant as a translation of an indigenous name having that signification, as Durga, 'a hill-fort,' a common affix to names of places in the Peninsula.

Karigê:—This should no doubt be read Karipê under which form it can be at once identified with Kaḍapâ, a place lying 5 miles from the right bank of the Northern Pennâr on a small tributary of that river.

Pikendaka:—*Konda* is a frequent termination in the names of towns in this part of India. The letters of Pikendaka may have been transposed in copying, and its proper form may have been Pennakonda, the name of a town in the district of Balâri (lat. 14° 5′ long. 77° 39′).

Iatour:—From Yule's map it would appear there is a place lying a degree westward from Kaḍapâ which still bears this name, Yêtûr.

Malanga:—In our notice of Melangê it was pointed out that Cunningham had fixed the locality of Malanga near Êlur, a place some distance inland about half way between the Kṛishṇâ and the Gôdâvarî towards their embouchures, and in the neighbourhood of which are the remains of an old capital named Veṅgî. With regard to the king's name Bassaronaga, he thinks that this may be identified with the Pali Maȷêrika-nâga of the *Mahâwaṅso* and thus Ptolemy's Malanga would become the capital of the Nâgas of Maȷerika, *Anc. Geo. of Ind.*, (pp. 539, 540). In Yule's

map Malanga is placed conjecturally about two degrees farther south at Velur, near the mouth of the Pennâr.

Of the five cities attributed to the Maisôloi, only Koroungkala can be recognized. It appears to be the place now known as Worańkal, the mediæval capital of Telingana. It has but few tokens remaining to attest its former grandeur.

Pityndra, the capital of Maisôlia, was probably Dhanakaṭaka now Dharaṇikôṭa, about 20 miles above Bêǰwâḍâ on the Kṛishṇâ.

94. Islands lying near the part of India which projects *into the ocean* in the Gulf of Kanthi :—

Barakê	111°	18°

95. And along the line of coast as far as the Kolkhic Gulf :—

Milizêgyris (or Milizigêris)	110°	12° 30′
Heptanêsia.....	113°	13°
Trikadiba	113° 30′	11°
Peperinê.....	115°	12° 40′
Trinêsia	116° 20′	12°
Leukê.....	118°	12°
Nanigêris	122°	12°

96. And in the Argaric Gulf :—

Kôry	126° 30′	—13°

Barakê :—This is the name given in the *Periplûs* to the Gulf of Kachh, called by our author the Gulf of Kanthi, a name which to this day is applied to the south coast of Kachh. The *Periplûs* does not mention Barakê as an island, but says that the Gulf had 7 islands. Regarding

Barakê, Dr. Burgess says: "Yule places Barakê at Jaggat or Dwârakâ; Lassen also identifies it with Dwârakâ, which he places on the coast between Purbandar and Miyânî, near Śrînagar. Mula-Dwârakâ, the original site, was further east than this, but is variously placed near Mâdhupur, thirty-six miles north-west from Sômanâth-Paṭṭan, or three miles south-west from Kôḍinâr, and nineteen miles east of Sômanâth. This last spot is called Mula-Dwârakâ to this day." (*Târîkh-i-Sôraṭh*, Introd. p. 7).

Milizêgyris occurs in the *Periplûs* as Melizeigara, which may be identified with Jayagaḍ or Sîdi-Jayagaḍ, which would appear to be the Sigerus of Pliny (lib. vi, c. 26).

Heptanêsia (*or group of* 7 *islands*) probably corresponded to the Sesikrienai of the *Periplûs*, which may be the Burnt Islands of the present day, among which the Viṅgôrlâ rocks are conspicuous.

Trikadiba or 'the island Trika,'—*diba* being the Sanskrit word *dvîpa*, 'an island.'

Peperinê:—This, to judge from the name, should be an island somewhere off the coast of Cottonara, the great pepper district, as stated by Pliny (lib VI, c. xxvi).

Trinêsia (*or group of* 3 *islands*):—Ptolemy places it off the coast of Limyrikê between Tyndis and Mouziris, but nearer the former.

Leukê:—This is a Greek word meaning 'white.' The island is placed in the *Periplûs* off the coast where Limyrikê begins and in Ptolemy near where it ends.

Nanigêris:—To judge from Ptolemy's

figures he has taken this to be an island lying between Cape Kumârî (Comorin) and Taprobanê (Ceylon).

Kôry:—It has already been noticed that Kôry was both the name of the Island of Râmêśvaram and of the promontory in which it terminated.

Cap. 2.

Position of India beyond the Ganges.

1. India beyond the Ganges is bounded on the west by the river Ganges; on the north by the parts of Skythia and Sêrikê already described, on the east by the Sinai along the Meridian, which extends from the furthest limits of Sêrikê to the Great Gulf, and also by this gulf itself, on the south by the Indian Ocean and part of the Green Sea which stretches from the island of Menouthias in a line parallel to the equator, as far as the regions which lie opposite to the Great Gulf.

India beyond the Ganges comprised with Ptolemy not only the great plain between that river and the Himâlayas, but also all south-eastern Asia, as far as the country of the Sinai (China) Concerning these vast regions Ptolemy is our only ancient authority. Strabo's knowledge of the east was limited in this direction by the Ganges, and the author of the *Periplûs*, who was a later and intermediate writer, though he was aware that inhabited countries stretched far beyond that limit even onwards to the eastern end of the world, appears to have learned little more

about them than the mere fact of their existence. Ptolemy, on the other hand, supplies us with much information regarding them. He traces the line of coast as far as the Gulf of Siam (his Great Gulf) enumerating the tribes, the trading marts, the river mouths and the islands that would be passed on the way. He has also a copious nomenclature for the interior, which embraces its inhabitants, its towns, its rivers, and its mountain ranges. His conceptions were no doubt extremely confused and erroneous, and his data, in many instances, as inconsistent with each other as with the reality. Still, his description contains important elements of truth, and must have been based upon authentic information. At the same time an attentive study of his nomenclature and the accompanying indications has led to the satisfactory identification of a few of his towns, and a more considerable number of the rivers and mountains and tribes which he has specified.

His most notable error consisted in the supposition that the eastern parts of Asia were connected by continuous land with the east coast of Africa, so that, like Hipparkhos, he conceived the Indian Ocean to resemble the Mediterranean in being surrounded on all sides by land. He makes accordingly the coast of the Sinai, beyond the Gulf of Siam, turn toward the south instead of curving up towards the north. Again he represents the Malay Peninsula (his Golden Khersonese) which does not project so far as to reach the equator, extend to 4 degrees southward from it, and he mentions neither the Straits of Malacca nor the great island of Sumatra, unless indeed

his Iabadios be this island, and not Java, as is generally supposed. By the Green Sea (*Πρασώδης θάλασσα*) which formed a part of the southern boundary is meant the southern part of the Indian Ocean which stretched eastward from Cape Prasum (Cape Delgado) the most southern point on the east coast of Africa known to Ptolemy. The island of Menouthias was either Zanzibar or one of the islands adjacent to it. It is mentioned by the author of the *Periplûs*.

In his description of India beyond the Ganges Ptolemy adheres to the method which he had followed in his account of India within the Ganges. He therefore begins with the coast, which he describes from the Eastern Mouth of the Ganges to the Great Promontory where India becomes conterminous with the country of the Sinai. The mountains follow, then the rivers, then the towns in the interior, and last of all the islands.

2. The seacoast of this division is thus described. In the Gangetic Gulf beyond the Mouth of the Ganges called Antibolei:—

The coast of the A i r r h a d o i:—

Pentapolis	150°	18°
Mouth of River Katabêda	151° 20′	17°
Barakoura, a mart	152° 30′	16°
Mouth of the River Tokosanna	153°	14° 30′

Wilford, probably misled by a corrupt reading, took the name of the A i r r h a d o i to be another form of Antibole. He says (*Asiat. Research.*, Vol. XIV, p. 444) "Ptolemy says that the easternmost branch of the Ganges was called Antibolê

or Airrhadon. This last is from the Sanskrit Hradâna; and is the name of the Brahmaputra. Antibole was the name of a town situated at the confluence of several large rivers to the S.E. of Ḍhakka and now called Feringibazar." By the Airrhadoi, however, are undoubtedly meant the Kirâta. With regard to the position here assigned to them Lassen thus writes (*Ind. Alt.*, vol. III, pp. 235–237):—"By the name K i r r a d i a Ptolemy designates the land on the coast of further India from the city of Pentapolis, perhaps the present Mirkanserai in the north, as far as the mouth of the Tokosanna or Arakan river. The name of this land indicates that it was inhabited by the Kirâta, a people which we find in the great Epic settled in the neighbourhood of the Lauhitya, or Brahmaputra, consequently somewhat further to the north than where Ptolemy locates them. Hence arises the question whether the Kirâta who, as we know, belong to the Bhoṭa, and are still found in Nêpâl had spread themselves to such a distance in earlier times, or whether their name has been erroneously applied to a different people. The last assumption is favoured by the account in the *Periplûs*, according to which ships sailing northward from Dôsarênê, or the country on both sides of the Vaitaraṇi, arrived at the land of the wild flat-nosed Kirradai, who like the other savage tribes were men-eaters. Since the author of that work did not proceed beyond Cape Comorin, and applied the name of Kiṛâta to a people which lived on the coast to the S.W. of the Ganges, it is certain that he had erroneously used this name to denote the wild and fabulous races. Ptolemy must have fol-

lowed him or other writers of the kind, and to the name Kirâta has given a signification which did not originate with himself. Although the Kirâta, long before the time in which he lived, had wandered from their northern Fatherland to the Himâlaya and thence spread themselves to the regions on the Brahmaputra, still it is not to be believed that they should have possessed themselves of territory so far south as Chaturgrâma (Chittagong) and a part of Arakan. We can therefore scarcely be mistaken if we consider the inhabitants of this territory at that time as a people belonging to further India, and in fact as tribal relatives of the Tamerai, who possessed the mountain region that lay back in the interior, as I shall hereafter show. I here remark that between the name of the city Pentapolis, *i.e. five cities*, and the name of the most northern part of Kirradia, Chaturgrâma, *i.e. four cities*, there is a connexion that can scarcely be mistaken, since Chaturgrâma could not originally have denoted a country, but only a place which later on became the capital, though it was originally only the capital of four village communities over which a common headship was possessed, while Pentapolis, was the seat of a headship over five towns or rather villages, as it can scarcely be believed that the rude tribes of Kirradia were civilized enough to possess towns. A confirmation of this view is offered by the circumstance that the Bunzu, who must have been descendants of a branch of the Tamerai, live in villages under headships. We must further state that according to the treatises used by Ptolemy the best *Malabathrum* was got from Kirradia. I

see no reason to doubt the correctness of this statement, although the trees from which this precious oil and spice were prepared and which are different kinds of the laurel, do not appear at the present day to be found in this country, since, according to the testimony of the most recent writers the botanical productions of Arakan at least have not as yet been sufficiently investigated. It can, however, be asserted that in Silhet, which is not very remote from Chaturgrâma, *Malabathrum* is produced at this very day." Saint-Martin expresses similar views. He writes (*Étude*, pp. 343, 344). "The Kirrhadia of Ptolemy, a country mentioned also in the *Periplûs* as lying west from the mouths of the Ganges and the Skyritai of Megasthenes are cantons of Kirâta, one of the branches of the aboriginal race the widest spread in Gangetic India, and the most anciently known. In different passages of the *Purâṇas* and of the epics their name is applied in a general manner to the barbarous tribes of the eastern frontiers of Âryavarta, and it has preserved itself in several quarters, notably in the eastern districts of Nêpâl. There is a still surviving tradition in Tripurî (Tipperah), precisely where Ptolemy places his Kirrhadia, that the first name of the country was Kirât (*J.A.S. Beng.*, Vol. XIX., Long, *Chronicles of Tripurâ*, p. 536). The Tamerai were a tribe of the same family."

Mouth of the River Katabêda:—This may be the river of Chittagong called the Karmaphulî. The northern point of land at its mouth is, according to Wilford (*Asiat. Research.* vol. XIV, p. 445) called Paṭṭana, and hence he thinks

that Chaṭgrâm or Chaturgrâm (Chittagong) is the Pentapolis of Ptolemy for Paṭṭanphulli, which means 'flourishing seat.' The same author has proposed a different identification for the Katabêda River. "In the district of Sandowê," he says, "is a river and a town called in modern maps Sedoa for Saindwa (for Sandwîpa)" and in Ptolemy S a d u s and S a d a. Between this river and Arakan there is another large one concealed behind the island of Cheduba, and the name of which is Kâtâbaidâ or Kâtâbaiza. This is the river Katâbêda of Ptolemy, which, it is true, he has placed erroneously to the north of Arakan, but as it retains its name to this day among the natives, and as it is an uncommon one in that country, we can hardly be mistaken. As that part of the country is very little frequented by seafaring people the Kâttâbaidâ is not noticed in any map or sea chart whatever. It was first brought to light by the late Mr. Burrows, an able astronomer, who visited that part of the coast by order of Government. In the language of that country *kâtû* is a fort and Byeitzâ or Baidzâ is the name of a tribe in that country." (*Asiat. Res.*, vol. XIV, pp. 452, 453).

B a r a k o u r a :—This mart is placed in Yule's map at Râmâi, called otherwise Râmu, a town lying 68 miles S.S.E. of Chittagong.

Mouth of the T o k o s a n n a :—This river Wilford and Lassen (*Ind. Alt.*, vol. III, p. 237) identified with the Arakan river. Yule prefers the Nâf, which is generally called the Teke-nâf, from the name of a tribe inhabiting its banks.

3. That of the Silver country (A r g y r a).

Sambra, a city	153° 30′	13° 45,
Sada, a city	154° 20′	11° 20,
Mouth of the River Sados	153° 30′	12° 30′
Bêrabonna, a mart	155° 30′	10° 20′
The mouth of the River Têmala	157° 30′	10°
Têmala, a city	157° 30′	9°
The Cape beyond it	157° 20′	8°

4. That of the B ê s y n g e i t a i Cannibals on the Sarabakic Gulf where are—

Sabara, a city	159° 30′	8° 30′
Mouth of the River Bêsynga	162° 20′	8° 25′
Bêsynga, a mart	162°	9°
Bêrabai, a city	162° 20′	6°
The Cape beyond it	159°	4° 40′

Arakan is no doubt the Silver Country, but the reason why it should have been so designated is not apparent, since silver has never so far as is known, been one of its products. It appears to have included part of the province of Pegu, which lies immediately to the south of it.

S a d a :—This town is mentioned in that part of Ptolemy's introductory book (ch. xiii, § 7) of which a translation has been given, as the first port on the eastern side of the Gangetic Gulf at which ships from Paloura on the opposite coast touched before proceeding to the more distant ports of the Golden Khersonese and the Great Gulf. It cannot be with certainty identified. "It may perhaps have been Ezata, which appears in Pegu legend as the name of a port between Pegu

and Bengal."—Yule, quoting *J.A.S. Beng.*, vol. XXVIII, p. 476.

B ê r a b o n n a :—The same authority suggests that this may be Sandowê, which Wilford proposed to identify with Sada.

T ê m a l a is the name of a town, a river, and a cape. In the introductory book (c. xiii, § 8) it is called Tamala, and said to lie to the south-east of Sada, at a distance of 3500 stadia. Yule would identify it, though doubtfully, with Gwa. Lassen again places it at Cape Negrais, which is without doubt the promontory which Ptolemy says comes after Têmala.

The S a r a b a k i c Gulf is now called the Gulf of Martaban :—The name (Bêsyngytai) of the cannibals is partly preserved in that of Bassein, which designates both a town and the river which is the western arm of the Irâwaḍî. Ptolemy calls this river the B ê s y n g a. The emporium of the same name Lassen takes to be Rangûn, but the similarity of name points to its identification with Bassein, an important place as a military position, from its commanding the river.

B ê r a b a i :—Beyond this Ptolemy has a promontory of the same name, which may be Barago Point. The names at least are somewhat similar and the position answers fairly to the requirements. Lassen took Bêrabai, the town, to be Martaban.

5. That of the G o l d e n K h e r s o n e s e (*Χρυσῆς Χερσονήσου*)

Takôla, a mart.....	160°	4° 15′
The Cape beyond it.....	158° 40′	2° 40′

Mouth of the River Khrysoa-nas	159°	1°
Sabana, a mart	160°	3°S.L
Mouth of the River Palandos	161°	2°S.L.
Cape Maleou Kôlon	163°	2°S.L′
Mouth of the River Attaba	164°	1°S.L.
Kôli, a town	164° 20′	on the equator
Perimoula	163° 15′	2° 20.
Perimoulik Gulf	168° 30′	4° 15′

The Golden Khersonese denotes generally the Malay Peninsula, but more specially the Delta of the Irâwaḍî, which forms the province of Pegu, the Suvarnabhumi (Pali form,—*Sovannabhumi*) of ancient times. The Golden Region which lies beyond this, in the interior, is Burmâ, the oldest province of which, above Ava, is still, as Yule informs us, formally styled in State documents Sonaparânta, *i.e.* 'Golden Frontier.'[26]

Takôla:—Rangûn, as Yule points out, or a port in that vicinity, best suits Ptolemy's position with respect to rivers, &c.,[27] while at the same

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[26] Thornton notices in his *Gazetteer of India* (s. v. *Burmah*) that when Colonel Burney was the resident in Ava, official communications were addressed to him under the authority of the "Founder of the great golden city of precious stones; the possessor of mines of gold, silver, rubies, amber and noble serpentine."

[27] Dr. Forchammer in his paper on *the First Buddhist Mission to Suvannabhûmî*, pp. 7, 16, identifies Takôla with the Burman Kola or Kula-taik and the Talaing Taîkkulâ, the ruins of which are still extant between the present Ayetthima and Kinyua, now 12 miles from the sea-shore, though it was an important seaport till the 16th century.—J. B.

time Thakalai is the legendary name of the founder of Rangûn Pagoda. There was, however, he says, down to late mediæval times, a place of note in this quarter called Takkhala, Takola, or Tagala, the exact site of which he cannot trace, though it was apparently on the Martaban side of the Sitang estuary.

Mouth of the Khrysoana River:—This must be the Eastern or Rangûn mouth of the Irâwaḍî, for, as Yule states on the authority of Dr. F. Mason, Hmâbi immediately north of Rangûn was anciently called Suvarṇanadî, *i.e.* 'Golden River,' and this is the meaning of Khrysoana.

Sabana:—This may be a somewhat distorted form of Suvarṇa, 'golden-coloured,' and the mart so called may have been situated near the mouth of the Saluen River. Yule therefore identifies it with Satung or Thatung. Lassen assigns it quite a different position, placing it in one of the small islands lying off the southern extremity of the Peninsula.

Cape Maleou Kôlon:—Regarding this Yule says, "Probably the Cape at Amherst. Mr. Crawford has noticed the singular circumstance that this name is pure Javanese, signifying "Western Malays." Whether the name Malay can be so old is a question; but I observe that in Bastian's *Siamese Extracts*, the foundation of Takkhala is ascribed to the Malays." Lassen places it much further south and on the eastern coast of the Peninsula, identifying it with Cape Romania (*Ind. Alt.*, vol. III, p. 232).

Kôli:—In the *Proceedings of the Royal Geographical Society*, vol. IV, p. 639 ff, Colonel

Yule has thrown much light on Ptolemy's description of the coast from this place to Kattigara by comparing the glimpse which it gives us of the navigation to China in the 1st or 2nd century of our era with the accounts of the same navigation as made by the Arabs seven or eight centuries later. While allowing that it would be rash to dogmatize on the details of the transgangetic geography, he at the same time points out that the safest guide to the true interpretation of Ptolemy's data here lies in the probability that *the nautical tradition was never lost.* He calls attention also to the fact that the names on the route to the Sinae are many of them Indian, specifying as instances Sabana, Pagrasa, R. Sôbanos, Tîpônobastê, Zaba, Tagora, Balonga, Sinda, Aganagara, Brama, Ambastas, Rabana, River Kottiaris, Kokkonagara, &c. At Kôli the Greek and Arab routes first coincide, for, to quote his words, "I take this Kôli to be the Kalah of the Arabs, which was a month's sail from Kaulam (Quilon) in Malabar, and was a place dependent on the Mahârâja of Zâbaj (Java or the Great Islands) and near which were the mountains producing tin. Ko-lo is also mentioned in the Chinese history of the T'ang dynasty in terms indicating its position somewhere in the region of Malaka. Kalah lay on the sea of Shalâhiṭ (which we call Straits of Malaka), but was not very far from the entrance to the sea of Kadranj, a sea which embraced the Gulf of Siam, therefore I presume that Kalah was pretty far down the Malay Peninsula. It may, however, have been Kadah, or Quedda as we write it,

in the sands about 50 miles north-west of the city, though in ancient times it appears to have poured its waters into the Ôxos.

The tribes that peopled Hyrkania and Margiana and the other regions that lay to the eastward of the Kaspian were for the most part of Skythian origin, and some of them were nomadic. They are described by the ancient writers as brave and hardy warriors, but of repulsive aspect and manners, and addicted to inhuman practices. Ptolemy names five as belonging to Margiana—the Derbikkai, Massagetai, Parnoi, Däai and Tapouroi.

The Derbikes are mentioned by Strabo (lib. XI, c. xi, sec. 7), who gives this account of them. "The Derbikes worship the earth. They neither sacrifice nor eat the female of any animal. Persons who attain the age of above 70 years are put to death by them, and their nearest relations eat their flesh. Old women are strangled and then buried. Those who die under 70 years of age are not eaten, but are only buried."

The Massagetai are referred to afterwards (c. xiii, sec. 3) as a tribe of nomadic Sakai, belonging to the neighbourhood of the river Askatangkas. They are mentioned by Herodotos (lib. I, c. cciv) who says that they inhabited a great portion of the vast plain that extended eastward from the Kaspian. He then relates how Cyrus lost his life in a bloody fight against them and their queen Tomyris. Alexander came into collision with their wandering hordes during the campaign of Sogdiana as Arrian relates (*Anab.* lib. IV, cc. xvi, xvii).

As regards the origin of their name it is referred by Beal (*J.R.A.S.*, N.S., vol. XVI, pp. 257, 279) to *maiza*—'greater' (in Moeso-Gothic) and Yue-ti (or chi). He thus reverts to the old theory of Rémusat and Klaproth, that the Yue-ti were Getae, and this notwithstanding the objection of Saint-Martin stated in *Les Huns Blancs*, p. 37, n. 1. The old sound of *Yue* he observes was *Get*, correspondent with the Greek form *Getai*. In calling attention to the Moeso-Gothic words *maiza* (greater) and *minniza* (less) he suggests that "we have here the origin of the names Massagetae, and the Mins, the Ta Yue-chi (great Yue-chi) and the Sian Yue-chi (little Yue-chi)."

The Parnoi, according to Strabo, were a branch of the Dahai (lib. XI, c. vii, sec. 1) called by Herodotos (lib. I, c. lii) the Däoi, and by our author and Stephanos of Byzantium the Däai. Strabo (lib. XI, c. viii, 2) says of them: "Most of the Skythians beginning from the Kaspian Sea, are called Dahai Skythai, and those situated more towards the east, Massagetai and Sakai, the rest have the common appellation of Skythians, but each separate tribe has its peculiar name. All, or the greater part of them, are nomadic." Virgil (*Aen.* lib. VIII, ! 728) applies to the Dahae the epithet *indomiti*. It is all but certain that they have left traces of their name in the province of Dahestân, adjoining to Asterâbâd, as this position was within the limits of their migratory range. In the name Dâae, Dahae or Ta-hia (the Chinese form) it is commonly inferred that we have the term Tajik, that is Persian, for there is good reason to place Persians even in Trans

oxiana long before the barbarous tribes of the Kaspian plains were heard of (see Wilson's *Arian. Antiq.*, p. 141).

The Tapouroi appear to be the same as the Tapyroi mentioned by Strabo as occupying the country between the Hyrkanoi and the Areioi. Their position, however, varied at various times.

Nisaia or Nigaia (the Nesaia of Strabo) has been identified by Wilson (*Arian. Antiq.*, pp. 142, 148) with the modern Nissa, a small town or village on the north of the Elburz mountains, between Asterâbâd and Meshd.

Cap. 11.

Position of Baktrianê.

1. Baktrianê is bounded on the west by Margianê along the side already described, on the north and east by Sogdianê, along the rest of the course of the River Ôxos, and on the south by the rest of Areia, extending from the extreme point towards Margianê—

the position of which is .....109° 39°

and by the Paropanisadai along the parallel thence prolonged, through where the range of Paropanisos diverges towards the sources of the Ôxos which lie in .....119° 30′ 39°

2. The following rivers which fall into the Ôxos flow through Baktrianê:—

The river Ôkhos, whose sources lie .....110° 39°

and the Dargamanês, whose sources lie .....116° 30′ 36° 20′
and the Zariaspis, whose sources lie .....113° 39°
and the Artamis, whose sources lie .....114° 39°
and the Dargoidos, whose sources lie .....116° 39°
and the point where this joins the Ôxos lies in .....117° 30′ 44°

3. Of the other tributaries the Artamis and the Zariaspis unite in .....113° 40° 40′ before falling into the Ôxos in.....112° 30′ 44°

4. The Dargamanês and the Ôkhos also unite in .....109° 40° 30 before falling into the Ôxos in.....109° 44°

5. Of the Paropanisos range, the western part is situated in .....111° 30′ 39° and [the Eastern] in .....119° 30′ 39°

6. The parts of Baktrianê in the north and towards the River Ôxos are inhabited by the Salaterai and the Zariaspai, and to the south of these up towards the Salaterai the Khomaroi, and below these the Kômoi, then the Akinakai, then the Tambyzoi, and below the Zariaspai the Tokharoi, a great people, and below them the Marykaioi, and the Skordai, and the Ouarnoi

(Varnoi), and still below those the Sabadioi, and the Oreisitoi, and the Amareis.

7. The towns of Baktrianê towards the river Ôxos are the following:—

Kharakharta	111°	44°
Zari(a)spa or Kharispa	115°	44°
Khoana	117°	42°
Sourogana	117° 30′	40° 30′
Phratou	119°	39° 20′

8. And near the other rivers these:—

Alikhorda	107°	43° 30′
Khomara	106° 30′	43° 30′
Kouriandra	109° 30′	42° 10′
Kauaris	111° 20′	43°
Astakana	112°	42° 20′
Ebousmouanassa or Tosmouanassa	108° 30′	41° 20′
Menapia	113°	41° 20′
Eukratidia	115°	42°

9. Baktra, the king's residence (Balkh) 116° 41°

Estobara	109° 30′	45° 20′
Marakanda (Samarkand)	112°	39° 15′
Marakodra	115° 20′	39° 20′

The boundaries of Baktra or Baktriana varied at different periods of history, and were never perhaps at any time fixed with much precision. According to Strabo it was the principal part of Ariana, and was separated from Sogdiana on the east and north-east by the Ôxos, from Areia on the south by the chain of Paropanisos, and on

the west from Margiana by a desert region. A description of Baktriana, which Burnes, in his work on Bokhara, corroborates as very accurate, is given by Curtius (lib. VII, c. iv) and is to this effect: "The nature of the Baktrian territory is varied, and presents striking contrasts. In one place it is well-wooded, and bears vines which yield grapes of great size and sweetness. The soil is rich and well-watered—and where such a genial soil is found corn is grown, while lands with an inferior soil are used for the pasturage of cattle. To this fertile tract succeeds another much more extensive, which is nothing but a wild waste of sand parched with drought, alike without inhabitant and without herbage. The winds, moreover, which blow hither from the Pontic Sea, sweep before them the sand that covers the plain, and this, when it gathers into heaps, looks, when seen from a distance, like a collection of great hills; whereby all traces of the road that formerly existed are completely obliterated. Those, therefore, who cross these plains, watch the stars by night as sailors do at sea, and direct their course by their guidance. In fact they almost see better under the shadow of night than in the glare of sunshine. They are, consequently, unable to find their way in the day-time, since there is no track visible which they can follow, for the brightness of the luminaries above is shrouded in darkness. Should now the wind which rises from the sea overtake them, the sands with which it is laden would completely overwhelm them. Nevertheless in all the more favoured localities the number of men and of horses that are

there generated is exceedingly great. Baktra itself, the capital city of that region, is situated under mount Paropanisos. The river Bactrus passes by its walls: and gave the city and the region their name." This description is in agreement with the general character of the country from Balkh to Bokhara, in which oases of the most productive soil alternate with wastes of sand.

Baktra figures very early in history. Its capital indeed, Baktra (now Balkh) is one of the oldest cities in the world. The Baktrian Walls is one of the places which Euripides (*Bakkhai*, l. 15) represents Dionysos to have visited in the course of his eastern peregrinations. Ninus, as we learn through Ktêsias, marched into Baktriana with a vast army and, with the assistance of Semiramis, took its capital. In the time of Darius it was a satrapy of the Persian empire and paid a tribute of 360 talents. Alexander the Great, when marching in pursuit of Bessus, passed through Baktria and, crossing the Ôxos, proceeded as far as Marakanda (Samarkand). Having subjugated the regions lying in that direction, he returned to Baktra and there spent the winter before starting to invade India. Some years after the conqueror's death Seleukos reduced Baktria, and annexed it to his other dominions. It was wrested, however, from the hands of the third prince of his line about the year 256 B.C. or perhaps later, by Antiokhos Theos or Theodotos, who made Baktria an independent kingdom. His successors were ambitious and enterprising, and appear to have extended their authority along the downward course of the

Indus even to the ocean, and southward along the coast as far as the mouth of the Narmadâ. The names of these kings have been recovered from their coins found in great numbers both in India and in Afghanistan. This Graeko-Baktrian empire, after having subsisted for about two centuries and a half, was finally overthrown by the invasion of different hordes of the Sakai, named, as Strabo informs us, the Asioi, Pasianoi, Tokharoi and Sakarauloi.[36] These Sakai yielded in their turn to barbarians of their own kindred or at least of their own type, the Skythians, who gave their name to the Indus valley and the regions adjoining the Gulf of Khambhât. Among the most notable Indo-Skythian kings were Kadphises and Kanerkes who reigned at the end of the first and the beginning of the second century of our æra and, therefore, not very long before the time of Ptolemy. Between the Indo-Skythian and Muhammadan periods was interposed the predominancy of Persia in the regions of which we have been speaking.

Ptolemy mentions five rivers which fall into the Ôxos: the Ôkhos, Dargamanês, Zariaspis, Artamis, and Dargoidos, of which the Zariaspis and Artamis unite before reaching the Ôxos. Ptolemy's account cannot be reconciled with the existing hydrography of the country. The D a r g a m a n ê s is called by Ammianus (lib. XXIII, c. vi) the Orga-

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[36] The Wu-sun (of Chinese history) are apparently to be identified with the Asii or Asiani, who, according to Strabo occupied the upper waters of the Iaxartes, and who are classed as nomades with the Tokhâri and Sakarauli (? Sara-Kauli, *i.e.*, Sarikulis).—Kingsmill, in *J.R.A.S.*, N.S., vol. XIV, p. 79.

menes. The Artamis, Wilson thinks, may be the river now called the Dakash (*Ariana Antiqua*, p. 162) and the Dargamanês, the present river of Ghori or Kunduz which is a tributary of the Ôkhos and not of the Ôxos as in Ptolemy. The Ôkhos itself has not been identified with certainty. According to Kinneir it is the Tezen or Tejend which, rising in Sarâkhs, and receiving many confluents, falls into the Kaspian in N. L. 38° 41′. According to Elphinstone it is the river of Herat, either now lost in the sand or going to the Ôxos (*Ariana Antiqua*, p. 146). Bunbury (vol. II, p 284) points out that in Strabo the Ôkhos is an independent river, emptying into the Kaspian. The Ôkhos of Artemidoros, he says, may be certainly identified with the Attrek, whose course, till lately, was very imperfectly known.

Ptolemy gives a list of thirteen tribes which inhabited Baktrianê. Their names are obscure, and are scarcely mentioned elsewhere.[37]

In the list of towns few known names occur. The most notable are Baktra, Marakanda, Eukratidia, and Zariaspa. Baktra, as has been already stated, is the modern Balkh. Heeren (*Asiatic Nations*, 2nd edit., vol. I, p. 424), writes of it in these terms: "The city of Baktra must be regarded as the commercial entrepôt of Eastern Asia: its name belongs to a people who never cease to afford

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[37] Prof. Beal (*J.R.A.S.*, N.S., Vol. XVI, p. 253), connects the name of the Tokharoi with Tu-ho-lo the name of a country or kingdom Tukhârâ, frequently mentioned by Hiuen Tsiang. The middle symbol *ho*, he says, represents the rough aspirate, and we should thus get Tahra or Tuxra, from which would come the Greek Tokharoi.

matter for historical details, from the time they are first mentioned. Not only does Baktra constantly appear as a city of wealth and importance in every age of the Persian empire, but it is continually interwoven in the traditions of the East with the accounts of Semiramis and other conquerors. It stood on the borders of the gold country, 'in the road of the confluence of nations,' according to an expression of the *Zend-avesta*; and the conjecture that in this part of the world the human race made its first advance in civilisation, seems highly probable." The name of Balkh is from the Sanskrit name of the people of Baktra, the Bahlîkas. Marakanda is Samarkand. It was the capital of Sogdiana, but Ptolemy places it in Baktrianê, and considerably to the south of Baktra, although its actual latitude is almost 3 degrees to the north. It was one of the cities of Sogdiana which Alexander destroyed. Its circumference was estimated at 64 stadia, or about 7 miles. The name has been interpreted to mean "warlike province." Eukratidia received its name from the Graeko-Baktrian king, Eukratidês, by whom it was founded. Its site cannot be identified. Pliny makes Zariaspa the same as Baktra, but this must be a mistake. No satisfactory site has been as yet assigned to it.

Cap. 12.

Position of the Sogdianoi.

The Sogdianoi are bounded on the west by that part of Skythia which extends from the section of the Ôxos which is towards Baktrianê and Margianê through the Oxeian mountains

as far as the section of the river Iaxartes, which lies in 110° E. 49° N.; on the north likewise by a part of Skythia along the section of the Iaxartes extended thence as far as the limit where its course bends, which lies in 120° E. 48° 30′ N. On the east by the Sakai along the (bending) of the Iaxartes as far as the sources of the bending which lie in 125° E. 43° N., and by the line prolonged from the Sakai to an extreme point which lies in 125° E. 38° 30′ N., and on the east and the south and again on the west by Baktrianê along the section of the Ôxos already mentioned and by the Kaukasian mountains especially so-called, and the adjoining line and the limits as stated, and the sources of the Ôxos.

2. The mountains called the Sogdian extend between the two rivers, and have their extremities lying in ..... 111° 47°
and ..... 122° 46° 30′

3. From these mountains a good many nameless rivers flow in contrary directions to meet these *two rivers*, and of these nameless rivers one forms the Oxeian Lake, the middle of which lies in 111° E. 45° N., and other two streams descend from the same hilly regions as the Iaxartes—the regions in question are called the Highlands of the Kômêdai. Each of these streams falls into the Iaxartes; one of them is called Dêmos and
its sources lie in .....124° 43°

Its junction with the river
Iaxartes occurs in ..... 123° 47°

The other is the Baskatis
whose sources lie in ..... 123° 43°

Its junction with the river
Iaxartes occurs in ..... 121° 47° 30′

4. The country towards the Oxeian mountains is possessed by the Paskai, and the parts towards the most northern section of the Iaxartes by the Iatioi, and the Tokharoi, below whom are the Augaloi; then along the Sogdian mountains the Oxydrângkai and the Drybaktai, and the Kandaroi, and below the mountains the Mardyênoi, and along the Ôxos the Ôxeianoi and the Khôrasmioi, and farther east than these the Drepsianoï, and adjoining both the rivers, and still further east than the above the Anieseis along the Iaxartes, and the Kirrhâdai (or Kirrhodeeis) along the Ôxos, and between the Kaukasos Range and Imaos the country called Ouandabanda.

5. Towns of the Sogdianoi in the highlands along the Iaxartes are these:—

Kyreskhata ..... 124° 43° 40′

Along the Ôxos:—

Oxeiana ..... 117° 30′ 44° 20′
Marouka ..... 117° 15′ 43° 40′
Kholbêsina ..... 121° 43°

6. Between the rivers and higher up—

Trybaktra	112° 15′	
Alexandreia Oxeianê	113°	44° 20′
Indikomordana	115°	44° 20′
Drepsa (or Rhepsa) the Metropolis	120°	45°
Alexandreia Eskhatê (*i.e.* Ultima)	122°	41°

Sogdiana was divided from Baktriana by the river Ôxos and extended northward from thence to the river Iaxartes. The Sakai lay along the eastern frontier and Skythic tribes along the western. The name exists to this day, being preserved in Soghd which designates the country lying along the river Kohik from Bokhara eastward to Samarkand. The records of Alexander's expedition give much information regarding this country, for the Makedonian troops were engaged for the better part of three years in effecting its subjugation.

In connexion with Sogdiana, Ptolemy mentions four mountain ranges—the Kaukasian, the Sogdian, the mountain district of the Kômêdai, and Imaos. Kaukasos was the general name applied by the Makedonians to the great chain which extended along the northern frontiers of Afghanistan, and which was regarded as a prolongation of the real Kaukasos. Ptolemy uses it here in a specific sense to designate that part of the chain which formed the eastern continuation of the Paropanisos towards Imaos. Imaos is the meridian chain which intersects the Kaukasos, and is now called Bolor Tâgh. Ptolemy places it about 8 degrees too far eastward. The

Sogdian Mountains, placed by Ptolemy between the Iaxartes and Ôxos, towards their sources, are the Thian Shan. The Kômêdai, who gave their name to the third range, were, according to Ptolemy, the inhabitants of the hill-country which lay to the east of Baktriana and up whose valley lay the route of the caravans from Baktra, bound for Sêrika across Imaus or the Thsung-lung. Cunningham has identified them with the Kiu-mi-tho (Kumidha) of Hiuen Tsiang. Their mountain district is that called Muz-tâgh.

The rivers mentioned in connexion with Sogdiana are the Ôxos, and the Iaxartes, with its two tributaries, the Baskatis and the Dêmos. The Ôxos takes its rise in the Pamîr[38] Lake, called the Sari-Kul (or Yellow Lake), at a distance of fully 300 miles to the south of the Iaxartes. It is fed on its north bank by many smaller streams which run due south from the Pamîr uplands, breaking the S.W. face of that region into a series of valleys, which, though rugged, are of exuberant fertility. Its course then lies for

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[38] The Pamîr plateau between Badakshan and Yarkand connects several chains of mountains, viz. the Hindu Kush in the S.W. the Kuen-luen in the E., the Karar Korum in the Bolor, the Thian-shân chain in the north, which runs from Tirak Dawan and Ming-yol to the Western Farghana Pass. This plateau is called *Bâm-i-dunyâ* or *Roof of the World*. With regard to the name Pamîr Sir H. Rawlinson says: "My own conjecture is that the name of Pamîr, or Fâmir, as it is always written by the Arabs, is derived from the Fani (*φαννοι*), who, according to Strabo bounded the Greek kingdom of Baktria to the E. (XI. 14) and whose name is also preserved in Fân-tâû, the Fân-Lake, &c. Fâmîr for Fân-mîr would then be a compound like Kashmir, Aj-mir, Jessel-mir, &c. signifying 'the lake country of the Fâ-ni.'" (*J.R.G.S.* XLII. p. 489, n.).

hundreds of miles through arid and saline steppes till before reaching the sea of Aral it is dissipated into a network of canals, both natural and artificial. Its delta, which would otherwise have remained a desert, has thus been converted into a fruitful garden, capable of supporting a teeming population, and it was one of the very earliest seats of civilization.[39] The deflexion of the waters of the Ôxos into the Aral, as Sir H. Rawlinson points out, has been caused in modern times not by any upheaval of the surface of the Turcoman desert, but by the simple accidents of fluvial action in an alluvial soil. The name of the river is in Sanskrit *Vakshu*, Mongolian *Bakshu*, Tibetan *Pakshu*, Chinese *Po-thsu*, Arabic and Persian *Vakhsh-an* or *âb*—from Persian *vah*='pure,' or Sanskrit *Vah*='to flow.' The region embracing the head-waters of the Ôxos appears to have been the scene of the primæval Aryan Paradise. The four rivers thereof, as named by the Brahmans, were the Sita, the Alakananda, the Vakshu, and the Bhadro =respectively, according to Wilson to the Hoang-ho, the Ganges, the Ôxos, and the Oby. According to the Buddhists the rivers were the Ganges, the Indus, the Ôxos, and the Sita, all of which they derived from a great central lake in the plateau of Pamîr, called A-neou-ta=Kara-kul or Sarik-kul Lake.

The Iaxartes is now called the Syr-darya or

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39 "Abu Rihan says that the Solar Calendar of Khwârasm was the most perfect scheme for the measurement of time with which he was acquainted. Also that the Khwârasmians dated originally from an epoch anterior by 980 years to the aera of the Seleucidae=134 B.C." (See *Quarterly Review*, No. 240, Art. on *Central Asia*).

Yellow River. The ancients sometimes called it the Araxes, but, according to D'Anville, this is but an appellative common to it with the Amu or Ôxos, the Armenian Aras and the Rha or Volga. The name Iaxartes was not properly a Greek word but was borrowed from the barbarians by whom, as Arrian states (*Anab* lib. III. c. xxx), it was called the Orxantes. It was probably derived from the Sanskrit root *kshar*, "to flow" with a semitic feminine ending, and this etymology would explain the modern form of *Sirr*. See *J.R.G.S.* XLII. p. 492, n. The Iaxartes rises in the high plateau south of Lake Issyk-kul in the Thian Shan. Its course is first to westward through the valley of Khokan, where it receives numerous tributaries. It then bifurcates, the more northern branch retaining the name of Syr-darya. This flows towards the north-west, and after a course of 1150 miles from its source enters the Sea of Aral. Ptolemy however, like all the other classical writers, makes it enter the Kaspian sea. Humboldt accounts for this apparent error by adducing facts which go to show that the tract between the Aral and the Kaspian was once the bed of an united and continuous sea, and that the Kaspian of the present day is the small residue of a once mighty Aralo-Kaspian Sea. Ammianus Marcellinus (lib. XXIII, c. vi), describing Central Asia in the upper course of the Iaxartes which falls into the Kaspian, speaks of two rivers, the Araxates and Dymas (probably the Dêmos of Ptolemy) which, rushing impetuously down from the mountains and passing into a level plain, form therein what is called the Oxian lake, which is spread over a vast area. This is the

earliest intimation of the Sea of Aral. (See Smith's *Dict. of Anc. Geog.* s. v.). Bunbury, however, says (vol. II, pp. 641-2): "Nothing but the unwillingness of modern writers to admit that the ancients were unacquainted with so important a feature in the geography of Central Asia as the Sea of Aral could have led them to suppose it represented by the Oxiana Palus of Ptolemy. While that author distinctly describes both the Jaxartes and the Oxus as flowing into the Caspian Sea, he speaks of a range of mountains called the Sogdian Mountains, which extend between the two rivers, from which flow several nameless streams into those two, one of which forms the Oxian lake. This statement exactly tallies with the fact that the Polytimetos or river of Soghd, which rises in the mountains in question, does not flow into the Oxus, but forms a small stagnant lake called Kara-kul or Denghiz; and there seems no doubt this was the lake meant by Ptolemy. It is true that Ammianus Marcellinus, in his description of these regions, which is very vague and inaccurate, but is based for the most part upon Ptolemy, terms it a large and widespread lake, but this is probably nothing more than a rhetorical flourish." The Iaxartes was regarded as the boundary towards the east of the Persian Empire, which it separated from the nomadic Skythians. The soldiers of Alexander believed it to be the same as the Tanais or Don.

In the list of the tribes of Sogdiana some names occur which are very like Indian, the Kandaroi, who may be the Gandhâras, the Mardyênoi, the Madras, the Takhoroi, the Takurs, and the

Kirrhadai (or Kirrhodeeis) the Kirâta. The name of the Khorasmioi has been preserved to the present day in that of Khwârazm, one of the designations of the Khanate of Khiva. The position of the Khorasmioi may be therefore assigned to the regions south of the Sea of Aral, which is sometimes called after them the Sea of Khwârazm. The Drepsianoi had their seats on the borders of Baktria, as Drepsa, one of their cities and the capital of the country, may be identified with Andarâb, which was a Baktrian town. It is called by Strabo Adrapsa and Darapsa—(lib. XI, c. xi, 2, and lib. XV, c. ii, 10) and Drapsaka by Arrian—(*Anab.* lib. III, c. 39). Bunbury (vol. I, p. 427, n. 3) remarks: "The Drepsa of Ptolemy, though doubtless the same *name*, cannot be the same place (as the Drapsaka of Arrian, *Anab.* lib. III, c. xxix) as that author places it in Sogdiana, considerably to the north of Marakanda." Ptolemy, however, as I have already pointed out, places Marakanda to the south of Baktra. Kingsmill (*J.R.A.S.*, N.S., vol. XIV, p. 82) identifies Darapsa with the Lam-shi-ch'eng of the Chinese historians. It was the capital of their Ta-hia (Tokhâra—Baktria) which was situated about 2000 li south-west of Ta-wan (Yarkand), to the south of the Kwai-shui (Ôxos). The original form of the name was probably, he says, Darampsa. In Ta-wan he finds the Phrynoi of Strabo. The region between Kaukasos and Imaös, Ptolemy calls Vandabanda, a name of which, as Wilson conjectures, traces are to be found in the name of Badakshân.

With regard to the towns Mr. Vaux remarks,

(Smith's *Dict.* s. v. Sogdiana): "The historians of Alexander's march leave us to suppose that Sogdiana abounded with large towns, but many of these, as Prof. Wilson has remarked, were probably little more than forts erected along the lines of the great rivers to defend the country from the incursions of the barbarous tribes to its N. and E. Yet these writers must have had good opportunity of estimating the force of these places, as Alexander appears to have been the best part of three years in this and the adjoining province of Baktriana. The principal towns, of which the names have been handed down to us, were Kyreskhata or Kyropolis on the Iaxartes (Steph. Byz. *s. v.*; Curt. lib. VI, c. vi) Gaza (Ghaz or Ghazni, Ibn Haukal, p. 270); Alexandreia Ultima (Arrian, lib. III, c. xxx; Curt. *l. c.*; Am. Marc., lib. XXIII, c. vi) doubtless in the neighbourhood, if not on the site of the present Khojend; Alexandreia Oxiana (Steph. Byz. *s. v.*); Nautaka (Arrian, *An.* lib. III, c. xxviii; lib. IV, c. xviii) in the neighbourhood of Karshi or Naksheb. Brankhidae a place traditionally said to have been colonized by a Greek population; and Marginia (Curt, lib. VII, c. x, 15) probably the present Marghinan."

Cap. 13.

Position of the Sakai.

[*Map of Asia* 7.]

1. The Sakai are bounded on the west by the Sogdianoi along their eastern side already described, on the north by Skythia along the

line parallel to the river Iaxartes as far as the limit *of the country* which lies in 130° E. 49° N. on the east in like manner by Skythia along the meridian lines prolonged from thence and through the adjacent range of mountains called Askatangkas as far as the station at Mount Imaös, whence traders start on their journey to Sêra which lies in 140° E. 43° N., and through Mount Imaös as it ascends to the north as far as the limit *of the country* which lies in 143° E. 35° N., and on the south by Imaös itself along the line adjoining the limits that have been stated.

2. The country of the Sakai is inhabited by nomads. They have no towns, but dwell in woods and caves. Among the Sakai is the mountain district, already mentioned, of the Kômêdai, of which the ascent from the Sogdianoi lies in ..... 125° 43°
And the parts towards the valley of the Kômêdai lie in .... 130° 39°
And the so-called Stone Tower lies in ..... 135° 43°

3. The tribes of the Sakai, along the Iaxartes, are the Karatai and the Komaroi, and the people who have all the mountain region are the Kômêdai, and the people along the range of Askatangka the Massagetai; and the people between are the Grynaioi Skythai and the Toörnai, below whom, along Mount Imaös, are the Byltai.

In the name of the mountain range on the east of the Sakai, Aska-tangk-as, the middle syllable represents the Turkish word *tâgh*—'mountain.' The tribe of the Karatai, which was seated along the banks of the Iaxartes, bears a name of common application, chiefly to members of the Mongol family—that of Karait. The name of the Massagetai, Latham has suggested, may have arisen out of the common name *Mustâgh*, but Beal, as already stated, refers it to the Moeso-gothic "*maiza*" and "Yue-chi—Getæ." The Byltai are the people of what is now called Little Tibet and also Baltistân.

Cap. 14.

Position of Skythia within Imaös.

[*Map of Asia* 7.]

1. Skythia within Imaös is bounded on the west by Sarmatia in Asia along the side already traced, on the north by an unknown land, on the east by Mount Imaös ascending to the north pretty nearly along the meridian of the starting-place already mentioned as far as the unknown land .....140° 63°, on the south and also on the east by the Sakai and the Sogdianoi and by Marginê along their meridians already mentioned as far as the Hyrkanian Sea at the mouth of the Ôxos, and also by the part of the Hyrkanian Sea lying between the north of the Ôxos and the river Rhâ according to such an outline.

2. The bend of the River Rhâ which marks the boundary of Sarmatia and
Skythia ..... 85° 54°
with the mouth of the river
Rhâ which lies in ..... 87° 30′ 48° 50′
Mouth of the river Rhym-
mos ..... 91° 48° 45′
Mouth of the river Daïx ..... 94° 48° 45′
Mouth of the river Iaxartes ..... 97° 48°
Mouth of the river Iästos .....100° 47° 20′
Mouth of the river Polyti-
mêtos .....103° 45° 30′
Aspabôta, a town .....102° 44°
after which comes the mouth of the Ôxos.

3. The mountains of Skythia within Imaõs are the more eastern parts of the Hyperborean hills and the mountains called
Alana, whose extremities
lie .....105° 59°
and .....118° 59° 30′

4. And the Rymmik mountains whose extremities lie ..... 90° 54°
and ..... 99° 47° 30′
from which flow the Rymmos and some other streams that discharge into the River Rhâ, uniting with the Daïx river.

5. And the Norosson range, of which the extremities lie ..... 97° 53° 30′
and .....106° 52° 30′
and from this range flow the Daïx and some other tributaries of the Iaxartes.

6. And the range of mountains called Aspisia whose extremities lie 111° 55° 30′
and ..... 117° 52° 30′
and from these some streams flow into the River Iaxartes.

7. And the mountains called Tapoura whose extremities lie ..... 120° 56°
and ..... 125° 49°
from which also some streams flow into the Iaxartes.

8. In addition to these in the depth of the region of the streams are the Syêba mountains whose extremities lie ..... 121° 58°
and ..... 132° 62°
and the mountains called the Anarea whose extremities lie ..... 130° 56°
and ..... 137° 50°
after which is the bend in the direction of Imaŏs continuing it towards the north.

9. All the territory of this Skythia in the north, adjoining the unknown regions, is inhabited by the people commonly called the Alanoi Skythai and the Souobênoi and the Alanorsoi, and the country below these by the Saitianoi and the Massaioi and the Syêboi, and along Imaŏs on the outer side the Tektosakes, and near the most eastern sources of the river Rhâ the Rhoboskoi below whom the Asmanoi.

10. Then the Paniardoi, below whom, more towards the river, the country of Kano-

dipsa, and below it the Koraxoi, then the Orgasoi, after whom as far as the sea the Erymmoi, to east of whom are the Asiôtai, then the Aorsoi, after whom are the Iaxartai, a great race seated along their homonymous river as far as to where it bends towards the Tapoura Mountains, and again below the Saitanioi are the Mologênoi, below whom, as far as the Rymmik range, are the Samnîtai.

11. And below the Massaioi and the Alana Mountains are the Zaratai and the Sasones, and further east than the Rymmik Mountains are the Tybiakai, after whom, below the Zaratai, are the Tabiênoi and the Iâstai and the Makhaitêgoi along the range of Norosson, after whom are the Norosbeis and the Norossoi, and below these the Kakhagai Skythai along *the country of* the Iaxartai.

12. Further west than the Aspisia range are the Aspisioi Skythai, and further east the Galaktophagoi Skythai, and in like manner the parts farther east than the Tapoura and Syêba ranges are inhabited by the Tapoureoi.

13. The slopes and summits of the Anarea Mountains and Mount Askatangkas are inhabited by the homonymous Anareoi Skythai below the Alanorsoi, and the Askatangkai

Skythai further east than the Tapoureoi, and as far as Mount Imaös.

14. But the parts between the Tapoura Mountains and the slope towards the mouth of the Iaxartes and the seacoast between the two rivers are possessed by the Ariakai, along the Iaxartes and below these the Namostai, then the Sagaraukai, and along the river Ôxos the Rhibioi, who have a town Dauaba ..... 104° 45°.

The country of the Skyths is spread over a vast area in the east of Europe and in Western and Central Asia. The knowledge of the Skyths by the Greeks dates from the earliest period of their literature, for in Homer (*Iliad*, lib. XIII, l. 4) we find mention made of the Galaktophagoi (milk-eaters) and the Hippemologoi (mare-milkers) which must have been Skythic tribes, since the milking of mares is a practice distinctive of the Skyths. Ptolemy's division of Skythia into within and beyond Imaös is peculiar to himself, and may have been suggested by his division of India into within and beyond the Ganges. Imaös, as has already been pointed out is the Bolor chain, which has been for ages the boundary between Turkistân and China. Ptolemy, however, placed Imaös too far to the east, 8° further than the meridian of the principal source of the Ganges. The cause of this mistake, as a writer in Smith's *Dictionary* points out, arose from the circumstance that the data upon which Ptolemy came to his conclusion were selected from two different sources. The Greeks first became acquainted with the

Kômêdorum Montes' when they passed the Indian Kaukasos between Kâbul and Balkh, and advanced over the plateau of Bâmiyân along the west slopes of Bolor, where Alexander found in the tribe of the Sibae the descendants of Hêraklês, just as Marco Polo and Burnes met with people who boasted that they had sprung from the Makedonian conquerors. The north of Bolor was known from the route of the traffic of the Sêres. The combination of notations obtained from such different sources was imperfectly made, and hence the error in longitude. This section of Skythia comprised Khiva, the country of the Kosaks, Ferghâna, Tashkend, and the parts about the Balkash.

The rivers mentioned in connexion with Skythia within Imaös are the Ôxos, Iaxartes, Rhâ, Rhymmos, Daïx, Iästos and Polytimêtos. The Rhâ is the Volga, which is sometimes called the Rhau by the Russians who live in its neighbourhood. Ptolemy appears to be the first Greek writer who mentions it. The Rhymmos is a small stream between the Rhâ and the Ural river called the Narynchara. The Daïx is the Isik or Ural river. The Iästos was identified by Humboldt with the Kizil-darya, which disappeared in the course of last century, but the dry bed of which can be traced in the barren wastes of Kizil-koum in W. Turkestân. With regard to the Polytimêtos, Wilson says (*Arian. Antiq.* p. 168): "There can be no hesitation in recognizing the identity of the Polytimêtês and the Zarafshân, or river of Samarkand, called also the Kohik, or more correctly the river of *the* Kohak; being so termed from its passing by

a rising ground, a Koh ak a 'little hill' or 'hillock,' which lies to the east of the city. According to Strabo, this river traversed Sogdiana and was lost in the sands. Curtius describes it as entering a cavern and continuing its course underground. The river actually terminates in a small lake to the south of Bokhara, the Dangiz, but in the dry weather the supply of water is too scanty to force its way to the lake, and it is dispersed and evaporated in the sands. What the original appellation may have been does not appear, but the denominations given by the Greeks and Persians 'the much-honoured' or 'the gold-shedding' stream convey the same idea, and intimate the benefits it confers upon the region which it waters." Ptolemy is wide astray in making it enter the Kaspian.

The mountains enumerated are the Alana, Rhymmika, Norosson, Aspisia, Tapoura, Syêba, and Anarea. By the Alana Mountains, which lay to the east of the Hyperboreans, it has been supposed that Ptolemy designated the northern part of the Ural Chain. If so, he has erroneously given their direction as from west to east. The Rhymmik mountains were probably another branch of that great meridian chain which consists of several ranges which run nearly parallel. The Norosson may be taken as Ptolemy's designation for the southern portion of this chain. The Aspisia and Tapoura mountains lay to the north of the Iaxartes. The latter, which are placed three degrees further east than the Aspisia, may be the western part of the Altai. The Syêba stretched still farther eastward with an inclina-

tion northward. To the southward of them were the Anarea, which may be placed near the sources of the Obi and the Irtish, forming one of the western branches of the Altai. Ptolemy erroneously prolongs the chain of Imaõs to these high latitudes.

Ptolemy has named no fewer than 38 tribes belonging to this division of Skythia. Of these the best known are the Alani, who belonged also to Europe, where they occupied a great portion of Southern Russia. At the time when Arrian the historian was Governor of Kappadokia under Hadrian, the Asiatic Alani attacked his province, but were repelled. He subsequently wrote a work on the tactics to be observed against the Alani (ἔκταξις κατ' Ἀλανῶν) of which some fragments remain. The seats of the Alani were in the north of Skythia and adjacent to *the unknown land*, which may be taken to mean the regions stretching northward beyond Lake Balkash. The position of the different tribes is fixed with sufficient clearness in the text. These tribes were essentially nomadic, pastoral and migratory—hence in Ptolemy's description of their country towns are singularly conspicuous by their absence.

Cap. 15.

The position of Skythia beyond Imaõs.

[*Map of Asia*, 8.]

1. Skythia beyond Mount Imaõs is bounded on the west by Skythia within Imaös, and the Sakai along the whole curvature of the

mountains towards the north, and on the north by the unknown land, and on the east by Serikê in a straight line whereof the extremities
lie in ..... 150° 63°
and ..... 160° 35°
and on the south by a part of India beyond the Ganges along the parallel of latitude which cuts the southern extremity of the line just mentioned.

2. In this division is situated the western part of the Auxakian Mountains, of which the extremities lie ..... 149° 49°
and ..... 165° 54°
and the western part of the mountains
called Kasia, whose extremities lie in 152° 41°
and ..... 162° 44°
and also the western portion of Emôdos,
whose extremities lie in ..... 153° 36°
and ..... 165° 36°
and towards the Auxakians, the source
of the River Oikhardês lying in ..... 153° 51°

3. The northern parts of this Skythia are possessed by the Abioi Skythai, and the parts below them by the Hippophagoi Skythai, after whom the territory of Auxakîtis extends onward, and below this again, at the starting place already mentioned, the Kasian land, below which are the Khatai Skythai, and then succeeds the Akhasa land, and below it along the Emôda the Kharaunaioi Skythai.

4. The towns in this division are these:–

Auxakia .....143° 49° 40′
Issêdôn Skythikê .....150° 49° 30′
Khaurana .....150° 37° 15′
Soita .....145° 35° 20′

Skythia beyond Imaös embraced Ladakh, Tibet, Chinese Tartary and Mongolia. Its mountains were the Auxakian and Kasian chains, both of which extended into Sêrikê, and Emôdos. The Auxakians may have formed a part of the Altai, and the Kasians, which Ptolemy places five degrees further south, are certainly the mountains of Kâshgar. The Emôdos are the Himalayas.

The only river named in this division is the Oikhardês, which has its sources in three different ranges, the Auxakian, the Asmiraean and the Kasian. According to a writer in Smith's *Dictionary* the Oikhardês "may be considered to represent the river formed by the union of the streams of Khotan, Yarkand, Kashgar and Ushi, and which flows close to the hills at the base of the Thian-shan." Saint-Martin again inclines to think Œchardês may be a designation of the Indus, while still flowing northward from its sources among the Himalayas. "Skardo," he says, (*Étude*, p. 420) "the capital of the Balti, bears to the name of the Oikhardês (Chardi in Amm. Marc. 2) a resemblance with which one is struck. If the identification is well founded, the river Oichardês will be the portion of the Indus which traverses Balti and washes the walls of Skardo."

In the north of the division Ptolemy places the Abioi Skythai. Homer, along with the Galak-

tophagoi and Hippêmolgoi, mentions the Abioi. Some think that the term in the passage designates a distinct tribe of Skythians, but others take it to be a common adjective, characterizing the Skythians in general as very scantily supplied with the means of subsistence. On the latter supposition the general term must in the course of time have become a specific appellation. Of the four towns which Ptolemy assigns to the division, one bears a well-known name, I s s ê d ô n, which he calls S k y t h i k ê, distinguish it from Issêdôn in Serikê. The name of the Issêdônes occurs very early in Greek literature, as they are referred to by the Spartan poet Alkman, who flourished between 671 and 631 B.C. He calls them A s s e d o n e s (*Frag.* 94, ed. Welcker). They are mentioned also by Hekataios of Miletos. In very remote times they were driven from the steppes over which they wandered by the Arimaspians. They then drove out the Skythians, who in turn drove out the Kimmerians. Traces of these migrations are found in the poem of Aristeas of Prokonnesos, who is fabled to have made a pilgrimage to the land of the Issêdones. Their position has been assigned to the east of Ichin, in the steppe of the central horde of the Kirghiz, and that of the Arimaspi on the northern declivity of the Altai. (Smith's *Dict.* s. v.) This position is not in accordance with Ptolemy's indications. Herodotos, while rejecting the story of the Arimaspians and the griffins that guarded their gold, admits at the same time that by far the greatest quantity of gold came from the north of Europe, in which he included the tracts along the Ural, and Altai

ranges. The abundance of gold among the Skythians on the Euxine is attested by the contents of their tombs, which have been opened in modern times. (See Bunbury, vol. I, p. 200.)

Regarding Ptolemy's Skythian geography, Bunbury says (vol. II, p. 597): "It must be admitted that Ptolemy's knowledge of the regions on either side of the Imaõs was of the vaguest possible character. Eastward of the Rhâ (Volga), which he regarded as the limit between Asiatic Sarmatia and Skythia, and north of the Iaxartes, which he describes like all previous writers as falling into the Kaspian—he had, properly speaking, no geographical knowledge whatever. Nothing had reached him beyond the names of tribes reported at second-hand, and frequently derived from different authorities, who would apply different appellations to the same tribe, or extend the same name to one or more of the wandering hordes, who were thinly dispersed over this vast extent of territory. Among the names thus accumulated, a compilation that is probably as worthless as that of Pliny, notwithstanding its greater pretensions to geographical accuracy, we find some that undoubtedly represent populations really existing in Ptolemy's time, such as the Alani, the Aorsi, &c., associated with others that were merely poetical or traditional, such as the Abii, Galaktophagi and Hippophagi, while the Issêdones, who were placed by Herodotos immediately east of the Tanais, are strangely transferred by Ptolemy to the far East, on the very borders of Serika; and he has even the name of a *town* which he calls Issedon Serika, and to which he

assigns a position in longitude 22° east of Mount Imaõs, and not less than 46° east of Baktra. In one essential point, as has been already pointed out, Ptolemy's conception of Skythia differed from that of all preceding geographers, that instead of regarding it as bounded on the north and east by the sea, and consequently of comparatively limited extent, he considered it as extending without limit in both directions, and bounded only by 'the unknown land,' or, in other words, limited only by his own knowledge."

Cap. 16.

Position of Serikê

[*Map of Asia*, 8].

Serikê is bounded on the west by Skythia, beyond Mount Imaös, along the line already mentioned, on the north by the unknown land along the same parallel as that through Thulê, and on the east, likewise by the unknown land along the meridian of which the extremities lie .....180° 63°
and .....180° 55°
and on the south by the rest of India beyond the Ganges through the same parallel as far as the extremity lying .....173° 55°
and also by the Sinai, through the line prolonged till it reaches the already mentioned extremity towards the unknown land.

2. Serikê is girdled by the mountains called Anniba, whose extremities lie.....153° 60°
and .....171° 56°

and by the eastern part of the Auxakians, of which the extremity lies.....165° 54°
and by the mountains called tho Asmiraia whose extremities lie .....167° 47° 30′
and .....174° 47° 30′
and by the eastern part of the Kasia range, whose extremities lie .....162° 44°
and .....171° 40°
and by Mount Thagouron whose centre lies .....170° 43°
and also by the eastern portion of the mountains called Emôda and Sêrika, whose extremity lies .....165° 36°
and by the range called Ottorokorrhas, whose extremities lie .....169° 36°
and.....176° 38°

3. There flow through the far greatest portion of Serikê two rivers, the Oikhardês, one of whose sources is placed with the Auxakioi, and the other which is placed in the Asmiraian mountains lies in .....174° 47° 30′
and where it bends towards the Kasia range .....160° 48° 30′
but the source in them lies .....161° 44° 15′
and the other river is called the Bautisos, and this has one of its sources in the Kasia range in .....160° 43°
another in Ottorokorrha .....176° 39°
and it bends towards the Emôda in .. 168° 39°
and its source in these lies ..... 160° 37°

4. The most northern parts of Serikê are

inhabited by tribes of cannibals, below whom is the nation of the Anniboi, who occupy the slopes and summits of the homonymous mountains. Between these and the uxakioi is the nation of the Syzyges, below whom are the Dâmnai, then as far as the river Oikhardes the Pialai (or Piaddai), and below the river the homonymous Oikhardai.

5. And again farther east than the Anniboi are the Garinaioi and the Rhabannai or Rhabbanaioi, and below the country of Asmiraia, above the homonymous mountains. Beyond these mountains as far as the Kasia range the Issêdones, a great race, and further east than these the Throanoi, and below these the Ithagouroi, to the east of the homonymous mountains, below the Issêdones, the Aspakârai, and still below those the Bâtai, and furthest south along the Emôda and Sêrika ranges the Ottorokorrhai.

6. The cities in Serikê are thus named:—

Damna	156°	51° 20′
Piala (or Piadda)	160°	49° 40
Asmiraia	170°	48°
Throana	174° 40′	47° 40′
7. Issêdôn Serikê	162°	45°
Aspakara (or Aspakaia)	162° 30′	41° 40′
Drôsakhê (or Rhosakla)	167° 40′	42° 30′
Paliana	162° 30′	41°
Abragana	163° 30′	39° 30′

8. Thogara	171° 20′	39° 40′
Daxata	174°	39° 30′
Orosana	162°	37° 30′
Ottorokorrha	165°	37° 15′
Solana	169°	37° 30′
Sêra metropolis	177°	38° 35′

The chapter which Ptolemy has devoted to Serikê has given rise to more abortive theories and unprofitable controversies than any other part of his work on Geography. The position of Serikê itself has been very variously determined, having been found by different writers in one or other of the many countries that intervene between Eastern Turkistan in the north and the province of Pegu in the south. It is now however generally admitted that by Serikê was meant the more northern parts of China, or those which travellers and traders reached by land. At the same time it is not to be supposed that the names which Ptolemy in his map has spread over that vast region were in reality names of places whose real positions were to be found so very far eastward. On the contrary, most of the names are traceable to Sanskrit sources and applicable to places either in Kaśmîr or in the regions immediately adjoining. This view was first advanced by Saint-Martin, in his dissertation on the Serikê of Ptolemy (*Étude*, pp. 411 ff.) where he has discussed the subject with all his wonted acuteness and fulness of learning. I may translate here his remarks on the points that are most prominent: "All the nomenclature," he says (p. 414), "except some names at the extreme points north

and east, is certainly of Sanskrit origin. . . . . To the south of the mountains, in the Panjâb, Ptolemy indicates under the general name of Kaspiraei an extension genuinely historical of the Kaśmîriau empire, with a detailed nomenclature which ought to rest upon informations of the 1st century of our æra; whilst to the north of the great chain we have nothing more than names thrown at hazard in an immense space where our means of actual comparison show us prodigious displacements. This difference is explained by the very nature of the case. The Brâhmans, who had alone been able to furnish the greater part of the information carried from India by the Greeks regarding this remotest of all countries, had not themselves, as one can see from their books, anything but the most imperfect notions. Some names of tribes, of rivers, and of mountains, without details or relative positions—this is all the Sanskrit poems contain respecting these high valleys of the North. It is also all that the tables of Ptolemy give, with the exception of the purely arbitrary addition of graduations. It is but recently that we ourselves have become a little better acquainted with these countries which are so difficult of access. We must not require from the ancients information which they could not have had, and it is of importance also that we should guard against a natural propensity which disposes us to attribute to all that antiquity has transmitted to us an authority that we do not accord without check to our best explorers. If the meagre nomenclature inscribed by Ptolemy on his map, of the countries situated beyond

(that is to the east) of Imaõs cannot lead to a regular correspondence with our existing notions, that which one can recognize, suffices nevertheless to determine and circumscribe its general position. Without wishing to carry into this more precision than is consistent with the nature of the indications, we may say, that the indications, taken collectively, place us in the midst of the Alpine region, whence radiate in different directions the Himâlaya, the Hindu-Kôh and the Bolor chain—enormous elevations enveloped in an immense girdle of eternal snows, and whose cold valleys belong to different families of pastoral tribes. Kaśmîr, a privileged oasis amidst these rugged mountains, appertains itself to this region which traverses more to the north the Tibetan portion of the Indus (above the point where the ancients placed the sources of the Indus) and whence run to the west the Ôxos and Iaxartes. With Ptolemy the name of Imaõs (the Greek transcription of the usual form of the name of Himâlaya) is applied to the central chain from the region of the sources of the Ganges (where rise also the Indus and its greatest affluent, the Śatadru or Satlaj) to beyond the sources of the Iaxartes. The general direction of this great axis from south to north, saving a bend to the south-east from Kaśmîr to the sources of the Ganges; it is only on parting from this last point that the Himâlaya runs directly to the east, and it is there also that with Ptolemy the name of Emôdos begins, which designates the Eastern Himâlaya. Now it is on Imaõs itself or in the vicinity of this grand

system of mountains to the north of our Panjâb and to the east of the valleys of the Hindu-Kôh and of the upper Ôxos that there come to be placed, in a space from 6 to 7 degrees at most from south to north, and less perhaps than that in the matter of the longitudes, all the names which can be identified on the map where Ptolemy has wished to represent, in giving them an extension of nearly 40 degrees from west to east, the region which he calls Skythia beyond Imaös and Serika. One designation is there immediately recognizable among all the others—that of K a s i a. Ptolemy indicates the situation of the country of Kasia towards the bending of Imaös to the east above the sources of the Ôxos, although he carries his Montes Kasii very far away from that towards the east; but we are sufficiently aware beforehand that here, more than in any other part of the Tables, we have only to attend to the nomenclature, and to leave the notations altogether out of account. The name of the Khaśa has been from time immemorial one of the appellations the most spread through all the Himâlayan range. To keep to the western parts of the chain, where the indication of Ptolemy places us, we there find Khaśa mentioned from the heroic ages of India, not only in the *Itihâsas* or legendary stories of the *Mahâbhârata*, but also in the law book of Manu, where their name is read by the side of that of the D a r a d a, another people well known, which borders in fact on the Khaśa of the north. The Khaśa figure also in the Buddhist Chronicles of Ceylon, among the people subdued by Aśôka in the upper Panjâb, and we find them mentioned

in more than 40 places of the Kaśmîr *Chronicle* among the chief mountain tribes that border on Kaśmîr. Baber knows also that a people of the name of Khas is indigenous to the high valleys in the neighbourhood of the Eastern Hindu-Kôh; and, with every reason, we attach to this indigenous people the origin of the name of Kâshgar, which is twice reproduced in the geography of these high regions. Khaśagiri in Sanskrit, or, according to a form more approaching the Zend, Khaśaghaïri, signifies properly the mountains of the Khaśa. The Akhasa Khôra, near the Kasia region, is surely connected with the same nationality. The A s p a k â r a i, with a place of the same name (Aspakara) near the Kasii Montes, have no correspondence actually known in these high valleys, but the form of the name connects it with the Sanskrit or Iranian nomenclature. Beside the Aspakarai, the B a t a i are found in the Bâutta of the *Râjataraṅgiṇi*. ..... In the 10th century of our æra, the Chief of Ghilghit took the title of Bhâtshâh or Shah of the Bhât. The B a l t i, that we next name, recall a people, mentioned by Ptolemy in this high region, the Byltai. The accounts possessed by Ptolemy had made him well acquainted with the general situation of the Byltai in the neighbourhood of the Imaös, but he is either ill informed or has ill applied his information as to their exact position, which he indicates as being to the west of the great chain of Bolor and not to the east of it, where they were really to be found. The R a m a n a and the D a ś a m a n a, two people of the north, which the *Mahâbhârata* and the Pauranik lists mention

along with the Chîna, appear to us not to differ from the Rhabannae and the Damnai of Ptolemy's table." Saint-Martin gives in the sequel a few other identifications—that of the Throanoi (whose name should be read Phrounoi, or rather Phaunoi as in Strabo) with the Phuna of the *Lalitavistara* (p. 122)—of the Kharaunaioi with the Kaĵana, whose language proves them to be Daradas, and of the Ithagouroi with the Dangors, Dhagars or Dakhars, who must at one time have been the predominant tribe of the Daradas. The country called Asmiraia he takes, without hesitation, to be Kaśmîr itself. As regards the name Ottorokorrha, applied by Ptolemy to a town and a people and a range of mountains, it is traced without difficulty to the Sanskrit—Uttara-kuru, *i.e.*, the Kuru of the north which figures in Indian mythology as an earthly paradise sheltered on every side by an encircling rampart of lofty mountains, and remarkable for the longevity of its inhabitants, who lived to be 1000 and 10,000 years old. Ptolemy was not aware that this was but an imaginary region, and so gave it a place within the domain of real geography. The land of the Hyperboreans is a western repetition of the Uttarakura of Kaśmîr.

Cap. 17.

Position of Areia.

[*Map of Asia* 9.]

Areia is bounded on the north by Margianê and by a part of Baktrianê along its southern side, as already exhibited. On the west by

Parthia and by the Karmanian desert along their eastern meridians that have been defined, on the south by Drangianê along the line which, beginning from the said extremity towards Karmania, and curving towards the north, turns through Mount Bagôos towards the east on to the extreme point which lies .....111° 34°
the position where the mountain curves is .....105° 32°
The boundary on the east is formed by the Paropanisadai along the line adjoining the extremities already mentioned through the western parts of Paropanisos; the position may be indicated at three different points, the southern .....111° 36°
the northern .....111° 30′ 39°
and the most eastern .....119° 30′ 39°

2. A notable river flows through this country called the Areias, of which the sources that are in Paropanisos, lie .....111° 38° 15′
and those that are in the Sariphoi . ..118° 33° 20′
The part along the lake called Areia, which is below these mountains, lies in .....108° 40′ 36°

3. The northern parts of Areia are possessed by the Nisaioi and the Astauênoi or Astabênoi, but those along the frontier of Parthia and the Karmanian desert by the Masdôranoi or Mazôranoi, and those along the frontier of Drangianê by the Kaseirôtai, and those along the Paropanisadai by the Parautoi, below whom are the Obareis

and intermediately the Drakhamai, below whom the Aitymandroi, then the Borgoi, below whom is the country called Skorpiophoros.

4. The towns and villages in Areia are these :—

Dista	102° 30′	38° 15′
Nabaris	105° 40′	38° 20′
Taua	109°	38° 45′
Augara	102°	38°
Bitaxa	103° 40′	38°
Sarmagana	105° 20′	38° 10′
Siphârê	107° 15′	38° 15′
Rhaugara	109° 30′	38° 10′
5. Zamoukhana	102°	37°
Ambrôdax	103° 30′	37° 30′
Bogadia	104° 15′	37° 40′
Ouarpna (Varpna)	105° 30′	37°
Godana	110° 30′	37° 30′
Phoraua	110°	37°
Khatriskhê	103°	36° 20′
Khaurina	104°	36° 20′
6. Orthiana	105° 15′	36° 20′
Taukiana	106° 10′	36°
Astauda	107° 40′	36°
Artikaudna	109° 20′	36° 10′
Alexandreia of the Areians	110°	36°
Babarsana of Kabarsana	103° 20′	35° 20′
Kapoutana	104° 30′	35° 30′

7. Areia, a city	105°	35°
Kaskê	107° 20′	35° 20′
Sôteira	108° 40′	35° 30′
Ortikanê	109° 20′	35° 30′
Nisibis	111°	35° 20′
Parakanakê	105° 30′	34° 20′
Sariga	106° 40′	34° 40′
8. Darkama	111°	34° 20′
Kotakê	107° 30′	33° 40′
Tribazina	106°	33°
Astasana	105°	33°
Zimyra	102° 30′	33° 15′

Areia was a small province included in Ariana, a district of wide extent, which comprehended nearly the whole of ancient Persia. The smaller district has sometimes been confounded with the larger, of which it formed a part. The names of both are connected with the well-known Indian word *ârya*, 'noble' or 'excellent.' According to Strabo, Aria was 2,000 stadia in length and only 300 stadia in breadth. "If," says Wilson (*Ariana Antiq.*, p. 150) "these measurements be correct, we must contract the limits of Aria much more than has been usually done; and Aria will be restricted to the tract from about Meshd to the neighbourhood of Herat, a position well enough reconcilable with much that Strabo relates of Aria, its similarity to Margiana in character and productions, its mountains and well-watered valleys in which the vine flourished, its position as much to the north as to the south of the chain of Taurus or Alburz, and its being bounded by Hyrkania,

Margiana, and Baktriana on the north, and Drangiana on the south."

Mount B a g ô o s on its south-east border, has been identified with the Ghûr mountains. The Montes S a r i p h i are the Hazâras. The river A r e i a s, by which Aria is traversed, is the Hari R û d o r river of Herat which, rising at Oba in the Paropanisan mountains, and having run westerly past Herat, is at no great distance lost in the sands. That it was so lost is stated both by Strabo and Arrian. Ptołemy makes it terminate in a lake; and hence, Rennell carried it south into the Lake of Seistân, called by Ptolemy the Areian lake. It receives the Ferrah-Rûd, a stream which passes Ferrah or Farah, a town which has been identified with much probability with the Phra mentioned by Isidôros in his *Mans. Parth.*, sec. 16. It receives also the Etymander (now the Helmand) which gave its name to one of the Areian tribes named by Ptolemy.

He has enumerated no fewer than 35 towns belonging to this small province, a long list which it is not possible to verify, but a number of small towns, as Wilson points out, occur on the road from Meshd to Herat and thence towards Qandahâr or Kâbul, and some of these may be represented in the Table under forms more or less altered. The capital of Areia, according to Strabo and Arrian, was Artakoana (v. ll. Artakakna, Artakana) and this is no doubt the A r t i k a u d n a of Ptolemy, which he places on the banks of the Areian lake about two-thirds of a degree north-west of his Alexandreia of the Areians. The identification of this Alexandreia is uncertain; most probably it was Herat, or some

place in its neighbourhood. Herat is called by oriental writers Hera, a form under which the Areia of the ancients is readily to be recognized. Ptolemy has a city of this name, and Wilson (*Ariana Antiqua*, p. 152), is of opinion that "Artakoana, Alexandria and Aria are aggregated in Herat." With reference to Alexandria he quotes a memorial verse current among the inhabitants of Herat: "It is said that Hari was founded by Lohrasp, extended by Gushtasp, improved by Bahman and completed by Alexander." The name of Sôteira indicates that its founder was Antiokhos Sôtêr.

Cap. 18.

Position of the Paropanisadai.

[*Map of Asia* 9.]

1. The Paropanisadai are bounded on the west by Areia along the aforesaid side, on the north by the part of Baktrianê as described, on the east by a part of India along the meridian line prolonged from the sources of the river Ôxos, through the Kaukasian mountains as far as a terminating point which

lies in .....119° 30′ 39°

and on the south by Arakhôsia along the line connecting the extreme points already determined.

2. The following rivers enter the country—the Dargamanês, which belongs to Baktrianê, the position of the sources of which has

been already stated; and the river which falls into the Kôa, of which the sources lie.....115° 34° 30′.

3. The northern parts are possessed by the Bôlitai, and the western by the Aristophyloi, and below them the Parsioi, and the southern parts by the Parsyêtai, and the eastern by the Ambautai.

4. The towns and villages of the Paropanisadai are these:—

Parsiana	118° 30′	38° 45′
Barzaura	114°	37° 30′
Artoarta	116° 30′	37° 30′
Baborana	118°	37° 10′
Katisa	118° 40′	37° 30′
Niphanda	119°	37°
Drastoka	116°	36° 30′
Gazaka or Gaudzaka	118° 30′	36° 15′
5. Naulibis	117°	35° 30′
Parsia	113° 30′	35°
Lokharna	118°	34°
Daroakana	118° 30′	34° 20′
Karoura, called also Ortospana	118°	35°
Tarbakana	114° 20′	33° 40′
Bagarda	116° 40′	33° 40′
Argouda	118° 45′	33° 30′

The tribes for which Paropanisadai was a collective name were located along the southern and eastern sides of the Hindu-Kush, which Ptolemy calls the Kaukasos, and of which his Paropanisos formed a part. In the tribe which he calls the

Bôlitai we may perhaps have the Kabolitae, or people of Kabul, and in the Ambautai the Ambashṭha of Sanskrit. The Parsyêtai have also a Sanskrit name—'mountaineers,' from *parvata*, 'a mountain,' so also the Parautoi of Areia The principal cities of the Paropanisadai were Naulibis and Karoura or Ortospana. Karoura is also written as Kaboura and in this form makes a near approach to Kabul, with which it has been identified. With regard to the other name of this place, Ortospana, Cunningham (*Anc. Geog. of Ind.*, p. 35) says: "I would identify it with Kâbul itself, with its Bala Hisâr, or 'high fort,' which I take to be a Persian translation of Ortospana or Urddhasthâna, that is, high place or lofty city." Ptolemy mentions two rivers that crossed the country of the Paropanisadai—the Dargamanês from Baktriana that flowed northward to join the Ôxos, which Wilson (*Ariana Antiqua*, p. 160) takes to be either the Dehas or the Gori river. If it was the Dehas, then the other river which Ptolemy does not name, but which he makes to be a tributary of the Kôa, may be the Sarkhâb or Gori river, which, however, does not join the Kôa but flows northward to join the Ôxos. Pâniṇi mentions Parśuṣthâna, the country of the Parśus, a warlike tribe in this reign, which may correspond to Ptolemy's Parsioi or Parsyetai.[40] The following places have been identified:—

Parsiana with Pañjshir; Barzaura with Bazârak; Baborana with Parwân; Drastoka with Istargaṛh; Parsiâ (capital of the

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[40] See Beal's *Bud. Rec. of Wn. Count.* vol. II, p. 285n.

Parsii) with Farzah, and Lokharna with Lôgaṛh south of Kâbul.

Cap. 19.

Position of Drangianê.

[*Map of Asia* 9.]

Drangianê is bounded on the west and north by Areia along the line already described as passing through Mount Bagôos, and on the east by Arakhôsia along the meridian line drawn from an extreme point lying in the country of the Areioi and that of the Paropanisadai to another extreme point, of which the position is in .....111° 30′ 28′

and on the south by a part of Gedrôsia along the line joining the extreme points already determined, passing through the Baitian mountains.

2. There flows through the country a river which branches off from the Arabis of which the sources lie .....109° 32° 30′

3. The parts towards Areia are possessed by the Darandai, and those towards Arakhôsia by the Baktrioi, the country intermediate is called Tatakênê.

4. The towns and villages of Drangianê are said to be these:—

Prophthasia .....110° 32° 20′

Rhouda .....106° 30′ 31° 30′

Inna	109°	31° 30′
Arikada	110° 20′	31° 20′
5. Asta	117° 30′	30° 40′
Xarxiarê	106° 20′	29° 15′
Nostana	108°	29° 40′
Pharazana	110°	30°
Bigis	111°	29° 40′
Ariaspê	108° 40′	28° 40′
Arana	111°	28° 15′

Drangianê corresponds in general position and extent with the province now called Seistân. The inhabitants were called Drangai, Zarangae, Zarangoi, Zarangaioi and Sarangai. The name, according to Burnouf, was derived from the Zend word, *zarayo*, 'a lake,' a word which is retained in the name by which Ptolemy's Areian lake is now known—Lake Zarah. The district was mountainous towards Arakhôsia, which formed its eastern frontier, but in the west, towards Karmania, it consisted chiefly of sandy wastes. On the south it was separated from Gedrôsia by the Baitian mountains, those now called the Washati. Ptolemy says it was watered by a river derived from the Arabis, but this is a gross error, for the Arabis, which is now called the Purali, flows from the Baitian mountains in an opposite direction from Drangiana. Ptolemy has probably confounded the Arabis with the Etymander or Helmand river which, as has already been noticed, falls into Lake Zarah.

Ptolemy has portioned out the province among three tribes, the Darandai (Drangai ?) on the north, the Baktrioi to the south-east, and the people of Tatakênê between them.

The capital was Prophthasia which was distant, according to Eratosthenes, 1500 or 1600 stadia from Alexandria Areiôn (Herat). Wilson therefore fixes its site at a place called Peshawa-run, which is distant from Herat 183 miles, and where there were relics found of a very large city. This place lies between Dushak and Phra, *i.e.* Farah, a little to the north of the lake. These ruins are not, however, of ancient date, and it is better therefore to identify Prophthasia with Farah which represents Phra or Phrada, and Phrada, according to Stephanos of Byzantium, was the name of the city which was called by Alexander Prophthasia (Bunbury, vol. I, p. 488). Dashak, the actual capital of Seistân, is probably the Zarang of the early Muhammadan writers which was evidently by its name connected with Drangiana. In the Persian cuneiform inscription at Behistun the country is called Zasaka, as Rawlinson has pointed out (see Smith's *Dictionary*, s. v. Drangiana). The place of next importance to the capital was Ariaspê, which Arrian places on the Etymander (*Anab.*, lib. IV, c. vii). The people were called Ariaspai at first, or Agriaspai, but afterwards Euergetai,—a title which they had earned by assisting Cyrus at a time when he had been reduced to great straits.

Cap. 20.

Position of Arakhôsia.

Arakhôsia is bounded on the west by Drangianê, on the north by the Paropanisadai, along the sides already determined, on the east by the part of India lying along the meridian

line extended from the boundary towards the Paropanisadai as far as an extreme point lying.....119° 28°
and on the south by the rest of Gedrôsia along the line joining the extreme points already determined through the Baitian range.

2. A river enters this country which branches off from the Indus of which the sources lie in .....114° 32° 30′
and the divarication (ἐκτροπὴ)
in .....121° 30′ 27° 30′
and the part at the lake formed by it which is called Arakhôtos Krênê (fountain)—
lies in .....115° 28° 40′

3. The people possessing the north parts of the country are the Parsyêtai, and those below them the Sydroi, after whom are the Rhôploutai and the Eôrîtai.

4. The towns and villages of Arakhôsia are said to be these :—

Ozola (or Axola)	114° 15′	32° 15′
Phôklis	118° 15′	32° 10′
Arikaka	113°	31° 20′
Alexandreia	114°	31° 20′
Rhizana	115°	31° 30′
Arbaka	118°	31° 20′
Sigara	113° 15′	30°
Khoaspa	115° 15′	30° 10′
5. Arakhôtos	118°	30° 20′
Asiakê	112° 20′	29° 20′
Gammakê	116° 20′	29° 20′

Malianê	118°	29° 20′
Dammana	113°	28° 20′

Arakhôsia comprised a considerable portion of Eastern Afghanistan. It extended westward beyond the meridian of Qandahâr and its eastern frontier was skirted by the Indus. On the north it stretched to the mountains of Ghûr, the western section of the Hindu-Kush, and on the south to Gedrôsia from which it was separated by the Baitian mountains, a branch of the Brahui range. The name has been derived from Haraqiati, the Persian form of the Sanskrit Sarasvatî, a name frequently given to rivers (being a compound of *saras*, 'flowing water,' and the affix *vatî*) and applied among others to the river of Arakhôsia. The province was rich and populous, and what added greatly to its importance, it was traversed by one of the main routes by which Persia communicated with India. The principal river was that now called the Helmand which, rising near the Koh-i-bâbâ range west of Kâbul, pursues a course with a general direction to the south-west, and which, after receiving from the neighbourhood of Qandahâr the Argand-âb with its affluents, the Tarnak and the Arghasan, flows into the lake of Zarah. Ptolemy mentions only one river of Arakhôsia and this, in his map, is represented as rising in the Paryêtai mountains (the Hazâras) and flowing into a lake from which it issues to fall into the Indus about $3\frac{1}{2}$ degrees below its junction with the combined rivers of the Panjâb. This lake, which, he says, is called Arakhotos Krênê, he places at a distance of not less than 7 degrees from his Areian lake. In the text

he says that the river is an arm of the Indus, a statement for which it is difficult to find a reason.

The capital of Arakhôsia was Arkhôtos, said by Stephanos of Byzantium to have been founded by Semiramis. Regarding its identification Mr. Vaux (Smith's *Dictionary*, s. v.) says: "Some difference of opinion has existed as to the exact position of this town, and what modern city or ruins can be identified with the ancient capital? M. Court has identified some ruins on the Arghasan river, 4 parasangs from Qandahâr, on the road to Shikarpur, with those of Arakhôtos, but these Prof. Wilson considers to be too much to the S.E. Rawlinson (*Jour. Geog. Soc.*, vol. XII, p. 113) thinks that he has found them at a place now called Ulân Robât. He states that the most ancient name of the city, Kophen, mentioned by Stephanos and Pliny, has given rise to the territorial designation of Kipin, applied by the Chinese to the surrounding country. The ruins are of a very remarkable character, and the measurements of Strabo, Pliny, and Ptolemy are, he considers, decisive as to the identity of the site. Stephanos has apparently contrasted two cities—Arakhôsia, which he says is not far from the Massagetae, and Arakhôtas, which he calls a town of India. Sir H. Rawlinson believes the contiguity of the Massagetae and Arakhôsia, may be explained by the supposition that by Massagetae, Stephanos meant the Sakai, who colonized the Hazâra mountains on their way from the Hindu-Kush to Sakastân or Seistân." Another account of the origin of the name Seistân is that it is a corruption of the word Saghistân, *i.e.*, the country of

the *saghis*, a kind of wood which abounds in the province and is used as fuel. Arakhôsia, according to Isidoros of Kharax, was called by the Parthians "White India."

Cap. 21.

Position of Gedrôsia.

Gedrôsia is bounded on the west by Karmania along the meridian line, already determined as far as the sea, and on the north by Drangianê and Arakhôsia along the separate meridian lines passing through these countries, and on the east by part of India along the river Indus following the line prolonged from the boundary towards Arakhôsia to its termination at the sea in .....109° 20°
and on the south by a part of the Indian Ocean. It is thus described through its circuit.

2. After the extremity towards Karmania
the mouth of the River Arabis ..105° 20° 15′
the sources of the river .....110° 27° 30′
the divarication of the river
entering Drangianê .....107° 30′ 25°
Rhagiraua, a city.....106° 20°
Women's Haven (Gynaikôn
limên).....107° 20° 15′
Koiamba .....108° 20°
Rhizana .....108° 20′ 20° 15′
After which the extreme point
at the sea already mentioned .....109° 20°

3. Through Gedrôsia run the mountains called the Arbita, whose extreme points lie in.....160° (107 ?) 22°
and .....113° 26° 30′
from these mountains some rivers join the Indus and the source of one of these lies.....111° 25° 30′
and also there are some streams flowing through Gedrôsia, that descend from the Baitian range.

4. The maritime parts are possessed by the villages of the A r b i t a i, and the parts along Karamania by the P a r s i d a i (or Parsirai), and the parts along Arakhôsia by the M a u s a r n a i o i, all the interior of the country is called P a r a d ê n ê, and below it P a r i s i ê n ê, after which the parts towards the Indus river are possessed by the R h a m n a î.

5. The towns and villages of G e d r ô s i a are accounted to be these :—

Kouni	110°	27°
Badara	113°	27°
Mousarna	115°	27° 30′
Kottobara	118°	27° 30′
Soxestra or Sôkstra	118° 30′	25° 45′
Oskana	115°	26°
Parsis, the Metropolis	106° 30′	23° 30′
Omiza	110°	23° 30′
Arbis, a city	105°	22° 30′

6. The islands adjacent to Gedrôsia are—

Asthaia	105°	18°
Kodanê	(107 ?) 160° 30′	17°

Gedrôsia corresponds to the modern Baluchistân. Its coast line extended from the mouth of the Indus to Cape Jask near the Straits, which open into the Persian Gulf. Ptolemy however assigned the greater portion of this coast to Karmania which according to his view must have begun somewhere near Cape Passence. Arrian restricted the name of Gedrôsia to the interior of the country, and assigned the maritime districts beginning from the Indus to the Arabies, the Oreitai and the Ikhthyophagoi in succession. The ancient and the modern names of the province, Major Mockler tries to identify in his paper in the *Jour. R. As. Soc.*, N.S., vol. XI. pp. 129–154.

The people that possessed the maritime region immediately adjoining the Indus were called the Arbitai or Arabies. In one of their harbours the fleet of Nearkhos at the outset of his memorable voyage was detained for 24 days waiting till the monsoon should subside. This harbour was found to be both safe and commodious, and was called by Nearkhos the Port of Alexander. It is now Karâchi, the great emporium for the commerce of the Indus. The name of the people was applied also to a chain of mountains and to a river, the Arabis, now called the Purali, which falls into the Bay of Sonmiyâni. Ptolemy's Arabis, however, lay nearer Karmania, and may be taken to be the Bhasul, which demarcated the western frontier of the Oreitai, and to the east of which the district is still known by the name of Arbu. Ptolemy does not mention the Oreitai, but seems to have included their territory in that of the Arbitai.

The Rhamnai are placed in Ptolemy's map in the northern part of the province and towards the river Indus. This race appears to have been one that was widely diffused, and one of its branches, as has been stated, was located among the Vindhyas.

The Parsidai, who bordered on Karmania, are mentioned in the *Periplûs* (c. xxxvii) and also in Arrian's *Indika* (c. xxvi) where they are called Pasireës. They gave their names to a range of mountains which Ptolemy makes the boundary between Gedrôsia and Karmania, and also to a town, Parsis, which formed the capital of the whole province.

Of the other towns enumerated only one is mentioned in Arrian's *Indika*, Gynaikôn Limên, or women's haven, the port of Morontobara, near Cape Monze, the last point of the Pab range of mountains. The haven was so named because the district around had, like Carthage, a woman for its first sovereign.

The names of the two towns Badara and Mousarna occur twice in Ptolemy, here as inland towns of Gedrôsia, and elsewhere as seaport towns of Karmania. Major Mockler, who personally examined the Makrân coast from Gwadar to Cape Jâsk, and has thereby been enabled to correct some of the current identifications, has shown that Gwadar and Badara are identical. Badara appears in the *Indika* of Arrian as Barna.

I here subjoin, for comparison, a passage from Ammianus Marcellinus which traverses the ground covered by Ptolemy's description of Central and Eastern Asia. Ammianus wrote about the middle

of the fourth century of our æra, and was a well informed writer, and careful in his statement of facts. The extract is from the 23rd Book of his *History* :—

AMMIANUS MARCELLINUS—Book XXIII.

"If you advance from Karmania into the interior (*of Asia*) you reach the Hyrkanians, who border on the sea which bears their name. Here, as the poorness of the soil kills the seeds committed to it, the inhabitants care but little for agriculture. They live by hunting game, which is beyond measure varied and abundant. Tigers show themselves here in thousands, and many other wild beasts besides. I bear in mind that I have already described the nature of the contrivances by which these animals are caught. It must not be supposed, however, that the people never put hands to the plough, for where the soil is found richer than usual the fields are covered with crops. In places, moreover, that are adapted for being planted-out, gardens of fruit-trees are not wanting, and the sea also supplies many with the means of livelihood. Two rivers flow through the country whose names are familiar to all, the Oxus and Maxera. Tigers at times, when pressed by hunger on their own side of these rivers, swim over to the opposite side and, before the alarm can be raised, ravage all the neighbourhood where they land. Amidst the smaller townships there exist also cities of great power, two on the sea-board, Socunda and Saramanna, and the others inland—Azmorna and Solen, and Hyrkana, which rank above the others. The country next to this people on the north is said to be inhabited by the

A b i i, a most pious race of men, accustomed to despise all things mortal, and whom Jupiter (as Homer with his over-fondness for fable sings) looks down upon from the summits of Mount Ida. The seats immediately beyond the Hyrkanians form the dominions of the M a r g i a n i, who are nearly on all sides round hemmed in by high hills, and consequently shut out from the sea. Though their territory is for the most part sterile, from the deficiency of water, they have nevertheless some towns, and of these the more notable are Jasonion and Antiochia and Nisæa. The adjoining region belongs to the B a k t r i a n i, a nation hitherto addicted to war and very powerful, and always troublesome to their neighbours, the Persians, before that people had reduced all the surrounding states to submission, and absorbed them into their own name and nationality. In old times, however, even Arsakes himself found the kings who ruled in Baktriana formidable foes to contend with. Most parts of the country are, like Margiana, far distant from the sea, but the soil is productive, and the cattle that are pastured on the plains and hill-sides, are compact of structure, with limbs both stout and strong, as may be judged from the camels which were brought from thence by Mithridates and seen by the Romans during the siege of Cyzicus, when they saw this species of animal for the first time. A great many tribes, among which the T o c h a r i are the most distinguished, obey the Baktrians. Their country is watered, like Italy, by numerous rivers, and of these the A r t e m i s and Z a r i a s p e s after their union, and in like manner the combined O c h u s

and Orchomanes, swell with their confluent waters the vast stream of the Ôxos. Here also cities are to be found, and these are laved by different rivers. The more important of them are Chatra and Charte and Alicodra and Astacia and Menapila, and Baktra itself, which is both the capital and the name of the nation. The people, who live at the very foot of the mountains, are called the Sogdii, through whose country flow two rivers of great navigable capacity, the Araxates and Dymas, which rushing impetuously down from the mountains and passing into a level plain, form a lake of vast extent, called the Oxian. Here, among other towns, Alexandria, and Kyreschata, and Drepsa the Metropolis, are well known to fame. Contiguous to the Sogdians are the Sacae, an uncivilized people, inhabiting rugged tracts that yield nothing beyond pasture for cattle, and that are, therefore, unadorned with cities. They lie under Mounts Askanimia and Komedus. Beyond the valleys at the foot of these mountains and the village which they call Lithinon Pyrgon (Stone Tower) lies the very long road by which traders pursue their journey who start from this point to reach the Sêres. In the parts around are the declivities by which the mountains called Imaus and the Tapourian range, sink down to the level of the plains. The Skythians are located within the Persian territories, being conterminous with the Asiatic Sarmatians, and touching the furthest frontier of the Alani. They live, as it were, a sort of secluded life, and are reared in solitude, being scattered over districts that lie far apart, and that yield for the sustenance of life a

mean and scanty fare. The tribes which inhabit these tracts are various, but it would be superfluous for me to enumerate them, hastening as I am to a different subject. One fact must, however, be stated, that there are in these communities which are almost shut out from the rest of mankind by the inhospitable nature of their country, some men gentle and pious, as for instance, the Jaxartes and the Galaktophagi, mentioned by the poet Homer in this verse:

Γλακτοφάγων ἀβίωντε δικαιοτάτων ἀνθρώπων.

"Among the many rivers of Skythia which either fall naturally into larger ones, or glide onward to reach at last the sea, the Roemnus is of renown, and the Jaxartes and the Talicus, but of cities they are not known to have more than but three, Aspabota and Chauriana and Saga.

"Beyond these places in the two Skythias and on their eastern side lie the Sêres, who are girt in by a continuous circle of lofty mountain-peaks, and whose territory is noted for its vast extent and fertility. On the west they have the Skythians for their next neighbours, and on the north and east they adjoin solitudes covered over with snow, and on the south extend as far as India and the Ganges. The mountains referred to are called Anniva and Nazavicium and Asmira and Emodon and Opurocara. Through this plain which, as we have said, is cinctured on all sides by steep declivities, and through regions of vast extent, flow two famous rivers, the Œchardes and the Bautisus, with a slower current. The country is diversified in its character, here expanding into open plains, and there rising

in gentle undulations. Hence it is marvellously fruitful and well-wooded, and teeming with cattle. Various tribes inhabit the most fertile districts, and of these the Alitrophagi and Annibi and Sizyges and Chardi are exposed to blasts from the north and to frosts, while the Rabannae and Asmirae and Essedones, who outshine all the other tribes, look towards the rising sun. Next to these, on their western side, are the Athagorae and the Aspacarae. The Betae, again, are situated towards the lofty mountains fringing the south, and are famed for their cities which, though few in number are distinguished for their size and wealth; the largest of them being Asmira, and Essedon and Asparata and Sera, which are beautiful cities and of great celebrity. The Sêres themselves lead tranquil lives, and are averse to arms and war, and since people whose temper is thus sedate and peaceful relish their ease, they give no trouble to any of their neighbours. They enjoy a climate at once agreeable and salubrious; the sky is clear and the prevailing winds are wonderfully mild and genial. The country is well-shaded with woods, and from the trees the inhabitants gather a product which they make into what may be called fleeces by repeatedly besprinkling it with water. The material thus formed by saturating the soft down with moisture is exquisitely fine, and when combed out and spun into woof is woven into silk, an article of dress formerly worn only by the great, but now without any distinction even by the very poorest.[41]

[41] It was a notion long prevalent that silk was combed from the leaves of trees. Thus Virgil (*Georg.* II, 121)

The Sêres themselves live in the most frugal manner, more so indeed than any other people in the world. They seek after a life as free as possible from all disquiet, and shun intercourse with the rest of mankind. So when strangers cross the river into their country to buy their silks or other commodities, they exchange no words with them, but merely intimate by their looks the value of the goods offered for sale; and so abstemious are they that they buy not any foreign products. Beyond the Sêres live the Ariani, exposed to the blasts of the north wind. Through their country flows a navigable river called the Arias, which forms a vast lake bearing the same name. This same Aria has numerous towns, among which Bitana Sarmatina, and Sotera and Nisibis and Alexandria are the most notable. If you sail from Alexandria *down the river* to the Caspian Sea the distance is 1,500 stadia.

Immediately adjoining these places are the Paropanisatae, who look on the east towards the Indians and on the west towards Caucasus, lying themselves towards the slopes of the mountains. The River Ortogordomaris, which is larger than any of the others, and rises among the Baktriani, flows through their territory. They too, have some towns, of which the more celebrated are Agazaca and Naulibus and Ortopana, from which the navi-

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"Velleraque ut foliis depectant tenuia Seres." Strabo (XV, i, 20) describes silk as carded off the bark of certain trees. Pausanias, who wrote about 180 A.D. is the first classical author who writes with some degree of correctness about silk and the silk-worm. Conf. P. Mela, i, 2, 3; iii, 7, 1; Pliny, VI, 17, 20; Prop. i, 14, 22; Sol. 50; Isid. Orig. xix, 17, 6; ib. 27, 5.

gation along the coast to the borders of Media in the immediate neighbourhood of the Caspian Gates extends to 2,200 stadia. Contiguous to the Paropanisatae just named are the D r a n g i a n i, seated quite close to the hills and watered by a river called the A r a b i a n, because it rises in Arabia. Among their other towns they have two to boast of in particular, Prophthasia and Ariaspe, which are both opulent and famous. After these, and directly confronting them, A r a c h o s i a comes into view, which on its right side faces the Indians. It is watered by a stream of copious volume derived from the Indus, that greatest of rivers, after which the adjacent regions have been named. This stream, which is less than the Indus, forms the lake called A r a c h o t o s c r e n e. The province, among other important cities, has Alexandria and Arbaca and Choaspa. In the very interior of Persia is G e d r o s i a, which on the right touches the Indian frontier. It is watered by several streams, of which the Artabius is the most considerable. Where it is inhabited by the B a r b i t a n i the mountains sink down to the plains. A number of rivers issue from their very base to join the Indus, and these all lose their names when absorbed into that mightier stream. Here too, besides the islands there are cities, of which Sedratyra and Gunaikon Limen (Women's haven) are considered to be superior to the others. But we must bring this description here to an end, lest in entering into a minute account of the seaboard on the extremities of Persia we should stray too far from the proper argument."

APPENDIX OF ADDITIONAL NOTES.

1. On the latitude of Byzantium and of Tâsh-Kurghân—(p. 14).

Ptolemy, like Hipparkhos and all the ancients except Strabo, erroneously took the latitude of Byzantium (41° 1′) to be the same as that of Marseilles (43° 18′). The latitude of Tâsh-kurghân in the Pâmîr is 37° 46′ and its longitude 75° 10′ E.; the latitude of Tashkend is 42° 58′, and that of Och or Ush (near which there is a monument called at this day the Takht-i-Suleiman, 'Throne of Soliman,' which Heeren took to be the veritable stone tower of Ptolemy) is 40° 19′.

2. On Kouroula—(pp. 22, 63, and 64).

Lieut.-Colonel Branfill (*Names of Places in Tanjore*, p. 8), thinks this may be represented by Kurla or Koralai-gorla on the East Coast. "There is," he points out, "*Gorla*pâlem near Nizâmpaṭṭanam. (*Cf. Vingorla*, South Concan, Malabar Coast.)"

3. Argaric Gulf and Argeirou (pp. 22, 59, and 60).

Branfill in the work cited (pp. 8 and 9) says:— "Âṛṛaṅkarai (pronounced nowadays Âtraṅkarai), at the mouth of the Vagai looks very like the ancient '*Argari*,' and '*Sinus Argalicus*' (Yule), the Argaric Gulf . . *Αγχείρου* looks like Aṇaikarai, the ancient name of Adam's Bridge, so called by the Tamils as being the bridge or causeway *par excellence* . . . . . In the middle ages, before Pâmban was separated from the mainland by the

storm that breached the famous causeway, there is said to have been a great city, remains of which are still to be seen on the spit of sand opposite to Pâmban." *Αγχείρου* in Nobbe's edition appears as *Αργείρου*.

4. On Thelkheir—(pp. 63 and 64).

Branfill (p. 12), would identify this with Chidambaram—"the town between the Veḷḷâṛ and Kolladam (*Coleroon*) rivers, ... from *chit*=wisdom, and *ambara*, horizon, sky; = *Heaven of Wisdom*. Tillai, or Tillaivanam is the former name of this place, and it is familiarly known as Tillai even now amongst the natives. May not this be the ancient Thellyr and *Θελχείρ* of Ptolemy and the ancient geographers? But perhaps Teḷḷûr (near Vandavasi) may be it." Tillai, he points out (p. 30), is a tree with milky sap.

5. On Orthoura—(pp. 64 and 184).

Branfill (pp. 7 and 8), identifying this, says:—"Orattûr (pronounced Oratthûru) is found repeatedly in this (Kavêri Delta) and the adjacent districts, and may represent the 'Orthura' of ancient geographers, for which Colonel Yule's Map of Ancient India gives *Ureiyour*, and Professor Lassen's Wadiur."

6. On Arkatos—(p. 64).

Branfill, who takes this to designate a place and not a king, says (p. 11):—"Âṛkâḍ or Âṛukâḍu=six forests; the abode of six Rishis in old times. There are several places of this name in Tanjore and S. Arcot, besides the town of 'Arcot' near 'Vellore' (*Αρκατοῦ βασίλειον Σῶρα*). One of these would correspond better than that with Harkâtu of Ibn Batuta, who reached it the first

evening of his march inland after landing from Ceylon, apparently on the shallow coast of Madura or Tanjore (fourteenth century)."

7. On the River Adamas—(p. 71).

Professor V. Ball, in his Presidential Address to the Royal Geological Society of Ireland (read March 19, 1883), says:—"The *Adamas* River of Ptolemy, according to Lassen's analysis of the data, was not identical with the Mahanadi, as I have suggested in my 'Economic Geology' (p. 30), but with the Subanrikha, which is, however, so far as we know, not a diamond-bearing river, nor does it at any part of its course traverse rocks of the age of those which contain the matrix in other parts of India. This *Adamas* River was separated from the Mahanadi by the Tyndis and Dosaron; the latter, according to Lassen, taking its rise in the country of Kokkonaga (*i.e.* Chutia Nâgpur), and to which the chief town Dosara (the modern Doesa) gave its name. But, according to this view, the Dosaron must have been identical with the modern Brahmini, which in that portion of its course called the Sunk (or Koel), included a diamond locality. I cannot regard this identification as satisfactory, as it does not account for the Tyndis intervening between the Dosaron and Mahanadi, since, as a matter of fact, the Brahmini and Mahanadi are confluent at their mouths. Lassen, however, identifies the Dosaron with the Baiturnee, and the Tyndis with the Brahmini. This destroys the force of his remark, as to the origin of the name of the former, since at its nearest point it is many miles distant from Doesa."

8. On Mount Sardônyx—(p. 77).

Professor Ball in the address above cited, says:—"The sardonyx mines of Ptolemy are probably identical with the famous carnelian and agate mines of Rajpipla, or, rather, as it should be called, Ratanpur."

9. On Talara—(p. 90).

Branfill suggests the identification of this with Tellâr or Tillârampaṭṭu (p. 8).

10. On Pounnata—(p. 180).

"Punâḍu, Punnâḍu, or Punnâta, as it is variously written, seems also to be indicated by the Pannuta in Lassen's Map of Ancient India according to Ptolemy, and by the Paunata of Colonel Yule's Map of Ancient India, *ubi beryllus*." This place is about 70 miles to the south-east of Seringapatam.

11. On Arembour—(pp. 180, 182).

Branfill—(p. 8), identifies this with Arambaûr.

12. On Abour—(p. 184).

Branfill (p. 11), identifies this with "Âvûr, *cow-villa*, a decayed town, 5 miles S.W. of Kambakôṇam, with a temple and a long legend about a cow(â). May not this be the ancient Abur of the Map of Ancient India in Smith's Classical Atlas? Colonel Yule suggests Amboor, but this Âvûr seems nearer, and if not this there are several places in S. Arcot named Amûr."

13. On Argyrê—(p. 196).

Professor Ball says:—"There are no silver mines in Arakan, and considering the geological structure of the country, it is almost certain there never were any. I have been recently informed by General Sir A. Phayre that Argyrê is

probably a transliteration of an ancient Burmese name for Arakan. It seems likely therefore that it was from putting a Greek interpretation to this name that the story of the silver-mines owed its origin."

14. On the Golden Khersonese—(p. 197).

"Gold," says Mr. Colquhoun (*Amongst the Shans*, p. 2), "has been for centuries washed from the beds of the Irrawadi, Sitang, Salween, Mékong, and Yang-tsi-kiang rivers." The gold-reefs of Southern India which have of late attracted so much notice, are, he points out, but outcrops of the formation which extends on the surface for thousands of square miles in the Golden Peninsula.

15. On the Loadstone rocks (p. 242).

Professor Ball thinks these rocks may possibly be identified with certain hill-ranges in Southern India which mainly consist of magnetic iron (*Economic Geology of India*, p. 37).

16. On the sandy deserts of Baktria (p. 270).

In the *Proceedings* of the Royal Geographical Society for April last will be found a description of the Kara-kum sands, by M. Paul Lessar, who divides them into three classes. The *burkans* which form his 3rd class are of the nature described by Curtius. "The sand is wholly of a drifting nature; the slightest puff of wind effaces the fresh track of a caravan." He notices a place in the Khanate of Bokhara where whole caravans have been buried.

17. On the river Ôchos (p. 273).

"What hitherto has been taken for the dry bed of the Ochus is not the bed of a river, but merely

a natural furrow between sand-hills. Thus the bed of the Ochus has still to be discovered." *Proceedings* of the Royal Geog. Socy. for April, 1885.

18. On the Avestic names of rivers, &c. in Afghanistan—(pp. 305–19).

In the 1st chapter of the Vendîdâd the names are given of the sixteen lands said to have been created by Ahura Mazda. Of these the following nine have been thus identified by Darmesteter in his translation of the Zend-Avesta, *Sacred Books of the East*, Vol. IV, p. 2) :—

Zend name.	Old Persian.	Greek.	Modern.
Sughdha	Suguda	Sogdianê	(Samarkand)
Môuru	Margu	Margianê	Merv
Bâkhdhi	Bakhtri	Baktra	Balkh
Harôyu	Haraiva	Areia	Hari-Rûd
Vehrkâna	Varkâna	Hyrkania	Jorjân
Harahvaiti	Harauvati	Arakhôtos	Harût
Haêtuma*n*t		Etymandros	Helmend
Ragha	Raga	Rhagai	Raï
Hapta hi*n*du	Hi*n*davas	Indoi	(Pañjâb)

Some of these and other names are examined in an article in *The Academy* (May 16, 1885, No. 680), signed by Auriel Stein, from which the following particulars are gathered: "We recognize the 'powerful, faithful *Mourva*' as the modern Merv, the 'beautiful *Bâkhdhi*' as Balkh, *Haraêva* as Herât, the mountain *Vâitigaeśa* as the Bâdhgês of recent notoriety. The river *Harahvaiti* (Sansk. Sarasvatî) has been known in successive ages as Arakhôtos and Arghand-âb; but more important for Avestic geography is the large stream of which it is a tributary, the 'bountiful, glorious *Haêtumañt*,' the Etyman-

dros and Hermandus of classic authors, the modern *Helmand*.' " A passage is quoted from the Avesta where eight additional rivers seem to be named. "At its foot (the mountain Ushidao's, *i.e.* the Koh-i-Baba and Siâh-Kôh's) gushes and flows forth the *Hvâśtra* and the Hvaśpa, the *Fradatha* and the beautiful *Hvarenaṅhaiti* and *Ustavaiti* the mighty, and *Urvadha*, rich of pastures, and the *Erezi* and *Zarenumaiti*." The *Hvaśtra* Stein thinks may be the Khâsh-Rûd, and the *Hvaśpa* the Khuspâs-Rûd, both of which come from the south slope of the Siâh-Kôh and reach the eastern basin of the lagune where the lower course of the Helmand is lost. "In Khuspâs," he adds, "a place on the upper course of the Khuspâs-Rûd, we may recognize the town *Khoaspa* mentioned by Ptolemy in Arakhôsia. The name *hvaśpa* means "having good horses," and seems to have been a favourite designation for rivers in Irân. Besides the famous Khoaspês near Susa, we hear of another Khoaspes, a tributary of the Kabûl River." In Kâsh, a town on the Khâsh-Rûd may be recognized the station called Cosata by the Anonymous Ravennas. The *Fradatha* is Pliny's Ophradus (*i.e.* ὁ *Φράδος* of the Greek original) and now the Farâh-Rûd. The *Prophthasia* of Ptolemy and Stephanos of Byzantium is a literal rendering of *fradatha*, which in common use as neuter means (literally "proficiency"), "progress," "increase." The *Havrenanihaiti* is the *Pharnacotis* of Pliny and now the Harrût-Rûd, which like the Farâh-Rûd enters the lake of Seistân. *Farnahvati* has been suggested as the original and native form of Pharnacotis.

19. On the Griffins or Gryphons—(p. 295).

Professor Ball in a paper published in the *Proceedings* of the Royal Irish Academy, 2nd Ser., Vol. II. No. 6, pp. 312-13 (Pol. Lit. and Antiq.) says; "In the account which Photios gives of the Griffins, if we exclude from it the word *birds*, and for feathers read hair, we have a tolerably accurate description of the hairy black-and-tan coloured Thibetan mastiffs, which are now, as they were doubtless formerly, the custodians of the dwellings of the Thibetans, those of gold-miners, as well as of others. They attracted the special attention of Marco Polo, as well as of many other travellers in Thibet, and for a recent account of them reference may be made to Capt. Gill's '*River of Golden Sand.*'"

ERRATA.

Page 8, n. 5, for *Noble* read *Nobbe.*

„ 14, n. 12, after Tâsh-Kurghân insert its Lat. 37° 46′ (long. 75° 4′).

„ 20, n. for [IXXXIXI] read [/XXIX|].

„ 25, for *censure* in last line but one read *use.*

„ 51, l. 20, for Kandionoi read Pandionoi.

„ 63, l. 16, for *outlet* read *outset.*

„ 64, l. 13, omit *the* before Kolkhoi.

„ 68, l. 15, for *Gûdrû* read Gûdûr.

„ 70, l. 27, Katikardama should begin the line after.

„ 71, l. 18, after Dôsarôn instead of the dash insert the sign of equality (=) and so after "Adamas" in the next line, and after "Ganges" in line 21.

„ 75, Section 21 should have been *immediately* followed by the next 4 sections which appear on p. 78.

„ 76, l. 16, for '*punishment*' of the '*gods*' read '*punishment of the gods.*'

„ 80, l. 21, for Ṛikshavant read Ṛikshavat.

„ 81, l. 29, for Bidasis read Bibasis.

„ 87, l. 7, for the *comma* after the bracket put *period.*

„ 88, l. 26, for Rhonadis read Rhouadis.

Page 124, The sections 47–50 should have been placed after the notice of Iomousa on p. 126.

,, 140, l. 29, after 'second group' insert (*sections* 57 *and* 58).

,, 140, last line, after 'fourth group,' insert (*section* 61).

,, 141, l. 15, after 'sixth group' insert (*section* 64).

NOTES.

Pp. 1–32. This is the introduction of the translator with extracts from the author. For additional information read my Introduction. Almost all the Indian place-names mentioned in these pages have been commented on in their proper place in the body of the book.

P. 22. **J.B.**—Dr. J. Burgess (who added this Foot-Note when the book was first printed in the Indian Antiquary).

(Pp. 32–75) Description of the Sea-coast of India.

P. 33. **Western boundary of India.**—Read C.A.G., pp. 17–19 and pp. 666-667.

P. 34. **Paropanisos** or Central Hindukush.—The Skr. name is *Upari-śyena* (उपरि-श्येन), the *Upairi-saena* of Avesta, meaning 'higher than eagles' (ean fly). [Dr. Stein in a paper communicated to the 7th Oriental Congress held at Vienna.]

Ortospana.—Read C.A.G., p. 38.

Arakhosia.—It comprised a considerable portion of Eastern Afghanistan. It extended westward beyond the meridian of Kandahar and its eastern frontier was skirted by the Indus. This name is usually derived from the old name of the river Helmand—*Haraqaiti* (Avestic

Harahvaiti, Skr. *Sarasvatî*). Sir R. G. Bhandarkar derives it from the *Arkshodas*, the people of Mt. *Rikshoda* referred to in Pâṇini IV. 3. 91.

P. 35. **Imaös.**—The Himâlayas.

P. 86. **Aberia.**—Skr. *Âbhîra* आभीर।

Barake or Baraca (as Mr. Schoff spells it) has been connected with Dvârakâ द्वारका, (20° 22′ N., 69° 5′ E). It might be, better, connected with the *Bâhlîkas* (through *Balhika* and *Baḍhika*) who were defeated by King Chandra after crossing the seven mouths of the Indus. (तीर्त्वा सप्त मुखानि येन समरे सिन्धोर्जिता वाह्लिकाः—Meherauli Pillar Inscription of Chandra in Fleet's Gupta Inscriptions).

Mouths of the Indus.—The Inscription just quoted also refers to the seven mouths of the Indus. But changes in the courses of the Punjab rivers (fully described in J.A.S.B., 1886, Part II) make it impossible to identify correctly the mouths named by Ptolemy.

P. 37. **Syrâstra.**—सुराष्ट्र (Su-râshṭra "Good Kingdom") was the name of the Peninsula of Gujarat and also of its capital. The latter has been identified with Junâgaḍh (Jîrṇa-gaḍ जीर्ण गड़ or Old Fort), ancient Girinagara (Girnar). Read C.A.G., pp. 697–99.

P. 38. **Larikê.**—Lâṭa लाट is the Skr. form in use. It denotes the southern part of the Peninsula of Gujarat—the district between the Lower Mâhî and Tâpî. Sometimes it

extended to the N. even beyond the Mâhî. Its capital was Bhrigukachchha (Barygaza, Bharoch).

The River Mophis.—The *Mâhî*. The Greek form suggests that the older name was *Mâbhî*. (The final *S* is the nominative singular Greek suffix.) It is the *Mais* of the *Periplus* (p. 39).

P. 38. **Barygaza.**—Modern Bharoch, Skr. *Bhrigukachchha* (भृगुकच्छ), 20° 42′ N. and 72° 59′ E. The Skr. word means *High Coast Land* and so the district really is. But the traditional account is that it is so called because it was originally founded by the sage Bhrigu. The *Divyâvadâna* (pp. 544–586) of the Mahâyâna Buddhists states that *Bhirukachchha* (the Buddhist form of the word) was so named because founded by *Bhiru*, a minister of the king of *Roruka* (probably Alor in Sindh) in *Sauvîra*.

Gulf of Barygaza.—The Gulf of Cambay. Cambay or Khambhat is connected with *Skambha*, the Vedic form of the word *Stambha*.

P. 39. **Difficulties attending the navigation.**—The author of the *Periplus* writes: "Those sailing to Barygaza pass across this gulf [of Cambay], which is three hundred stadia in width, leaving behind to their left the island [=Piram Island opposite the mouth of the Narmadâ (21° 36′ N., 72° 21′ E.)] just visible from their tops toward the east, straight to the very mouth of the river of Barygaza; and this

river is called Nammadus (Narma-dâ नर्म्म-दा). This gulf is very narrow to Barygaza and very hard to navigate for those coming from the ocean; this is the case with both the right and left passages, but there is a better passage through the left. Far on the right at the very mouth of the gulf there lies a shoal, long and narrow, and full of rocks, called Herone, facing the village of *Cammoni*; and opposite this on the left projects the promontory that lies before *Aṣtacampra*, which is called Papica, and is a bad anchorage because of the strong current setting in around it and because the anchors are cut off, the bottom being rough and rocky." (Schoff's edition, pp. 40-41.)

The Promontory of Papica is Goaphat or Gopinath Point in the Peninsula of Gujarat. Astacampra is to be identified with *Hastakavapra* (mentioned in three Grants of Dhruvasena I of Valabhi), mod. *Hathab* in the Gogha Taluka of Bhaunagar territory (I.A., 1876, pp. 204, 314; 1878, p. 54). Hathab is now an inland village and not a port as it was in the days of the author of the *Periplus*. Herone shoal is no doubt (as Mr. Schoff remarks) the long bar at the eastern side of the gulf and *Cammoni* (the *Kamane* of Ptolemy) would be at the end of the promontory that lies to the N.W. of the mouth of the Tapti River, the entrance to the prosperous mediæval port of Surat.

Ariakê.—It might stand for the *Land of the Aryans* in contrast to the *Land of the Dravidians*, Damirike, located in the south. Varâhamihira's Bṛhat Saṁhitâ (XIV) mentions *Âryaka* together with *Cherya* (Cheraland ?) and locates it to the Southern Division of India. Dr. Indraji suggested *Aparânta*, an old name for the western coast (I.A., VII, pp. 259–263). Skr. *Aparânta* = Pkr. *Aaranta*. But *Aaranta* or *Aranta* cannot be satisfactorily equated with Aria[ke].

The *Periplus* makes it to be the beginning of the kingdom of *Mambarus*. The latter name has been corrected as *Nambanus* and identified with the Śaka ruler *Nahapâna*. But as there is no agreement even in a single syllable, this suggestion has little value. Prof. Aiyangar's suggestion (Beginnings of South Indian History) to take Mambarus as Lambodara (Pkr. Lamboara) is better, for it requires the correction of the first letter only. (The final "S" is the Nominative singular Greek suffix.) Lambodara was one of the *Śâtakarṇis* (or Andhra rulers) also known as the *Sâta-vâhanas*—the *Sadineis* of Ptolemy and *Saraganes* of the *Periplus* wherein *Sundara* of the same family seems to be mentioned as *Sandanes*.

P. 40. **Soupara.** Mod. Sopara (19° 25′ N., 72° 41′ E.); Śûrpâraka (शूर्पारक), its old name, occurs in the *Mahâbhârata* and the

Purâṇas as a holy place connected with *Paraśurâma*.

Ophir.—In the account of the Ophir trade given in the Bible (I Kings, ix, 26–28; I Kings, x, 11; II Chronicles, viii, 17, and ix, 10) the products mentioned, such as gold, ivory, apes, peacocks, being stated in their Indian names, scholars have attempted to locate Ophir somewhere in India. Dr. McCrindle's opinion that it is identical with Soupara is not at all satisfactory. For how to dispose of the initial *S*? If Ophir is to be located anywhere in India आभीर, *Âbhîra* (mentioned as Aberia in page 36), has the greatest claim. (Sanskrit *bh* is represented by Greek *ph*.)

But Biblical authorities nowadays are sufficiently sure in locating Ophir on the Arabian coast of the Persian Gulf. The Indian names of the products mentioned [Kophi कपि for apes, Tukhi-im (Togei in Malabar) for peacocks, etc.] prove only that the place was a trading centre with India.

P. 41. **Goaris.**—It may stand philologically for the *Godâvari* (गोदावरी) through its Pkr. form Goâarî, the final *S* being the Greek nominative suffix.

P. 42. **Simylla.**—Modern Chaul (18° 34′ N., 72° 55′ E.)—the Chi-mo-lo of Yüan Chwang, and the Saimur of the early Mohammedan travellers (Schoff). We are not sure of its Sanskrit name.

P. 45. **Baltipatna.**—The Palæpatmæ of the Periplus. [The Skr. form seems to be *Pâre-pattana* or the City on the Bank.] Probably modern Dâbhol (17° 35′ N., 73° 10′ E.) which is of considerable historical importance, being the principal port of the South Konkan.

P. 45. **Ariake of the Pirates.**—Mr. Campbell's suggestion that Ariâkê *'Ανδρῶν Πειρατῶν* ought to be taken as the *Ariake of the Andhrabhrityas* because Ptolemy does not mention anything of *Piracy* in this part of the country causes one to examine the matter well. Philologically Campbell's equation is not impossible. As for piracy in this coast, Pliny (VI, 26) has referred to the pirates which frequent this place. The Periplus (p. 44, Schoff's edition) also does the same. These facts make it probable that the coast might have thus got this name of *Pirate Ariake.* Ptolemy does not mention anything of piracy, because it was then stopped. The father of the well-known Red-Chera destroyed *Kadambu* of the sea-coast—piratical rendezvous of the tribe who became the Kadambas—and thus the coast was freed of pirates from A.D. 80 to A.D. 222 [Aiyangar's Beginnings of South Indian History, pp. 151-2, 229, 233].

P. 47. **Mandagara.**—The *Periplus* locates it before *Palæpatmæ.* Bânkuṭ (17° 59′ N., 70° 3′ E.) is at the mouth of the Sâvitri River.

Byzanteion.—Probably the modern Viza-

drog (विजयदुर्ग, 16° 33′ N., 73° 20′ E.) described as one of the best harbours on the Western Coast.

Khersonêsos.—"Peninsula" in Greek. It is the projecting point at the modern Kârwâr (14° 49′ N., 74° 8′ E.)—the tongue of land at the mouth of the Kâlî Nadî in North Kanara, just opposite to Oyester Rocks.

P. 48. **Nitra.**—Mr. Schoff takes it to be identical with the *Nitrias* of Pliny (VI, 26) and the White Island (Lieuke) of the *Periplus* —the modern Pigeon Island (14° 1′ N., 74° 16′ E.), also known as *Nitrān*.

Mr. Aiyangar takes it as identical with the *Naura* of the *Periplus* and supports Mr. Yule's identification of the latter with Mangalore and notes that the latter is at the head of the delta of the rivers *Netravatî* and Gurupa. (Beginnings of S.I. History, pp. 230-231.) Thus its name is still preserved in that of the river *Netravatî*.

Mr. Schoff located *Naura* at Cannanore.

P. 49. **Limyrikê.**—So it has been spelt in the *Periplus* also.

P. 56. **Tyndis.**—It has been described in the *Periplus* as 'of the Kingdom of *Cerobothra*' (चेर-पुच or *Kerala*). Mr. Schoff locates it at *Ponnâni* (10° 48′ N., 75° 56′ E.). Dr. Burnell and Mr. Aiyangar (Beg. S.I. History, p. 231) prefer *Kadalundi* near *Beypore* (11° 11′ N., 75° 49′ E.). *Tyndis* stands for Dravidian *Toṇḍi*.

P. 51. **Brâhmanai Magoi.**—The *Maga-Brâhmaṇas* have been referred to. They are the Magi or the priests of Zoroastrianism who migrated to India from *Śâka-dvîpa* or the Land of the *Śakas*. They naturalized themselves in India and got the rank of *Brâhmaṇas*, though their foreign origin was remembered and was the cause of their being treated as not "pure" or rather as "degraded" Brahmins. They are the priests in Jain Temples and in temples dedicated to the *Images of dead kings* (being the modern representative of the *Pratimâ* of the play of the same name ascribed to Bhâsa) in Râjaputana where they are known as the *Sevakas*. In Bihar the *Śâkadvîpis* are Ayurvedic physicians, and in Bengal they are astrologers. [For Weber's Über die मगव्यक्ति (of कृष्णदास मिश्र) see I.A., VIII, 1879, p. 328.]

Mouziris.—Muyiri-Kotta or *Musiri*. Its identification with *Kodungalur* or Cranganore (10° 14′ N., 76° 11′ E.) is certain. Musiri has been described in Dravidian literature as the place 'to which came the well-rigged ships of the Yavanas [Greeks], bringing gold and taking away spices in exchange.' It was the port of Vanji (the ancient capital of the Kerala country), also called Karuvûr (mod. Parûr or Paravûr, 10° 10′ N., 76° 15′ E.). [Aiyangar's B.S.I.H., p. 135; Schoff, p. 205.]

P. 52. **Pseudostomos.**—This 'false mouth' is

known in Dravidian literature as *Aḷemukham* (Aiyanger's A.I., p. 60)=Skr. *Alîka-Mukham*.

Bakerei.—Modern Parakâd (9° 22′ N., 76° 22′ E.) which was once a notable port. The Portuguese, and subsequently the Dutch had settlements at Parakâd (Schoff, pp. 211-212).

P. 53. **Aïoi.**—It has no connection with Skr. *Ahi* (अहि) "Serpent" as suggested by Dr. McCrindle. It is the Dravidian *Aay*. The chieftaincy of *Aay* was round the Podyil hill in the Western Ghats, to the south of the Palghat Gap and to the west of Tinnevelly (Tiru-Nelveli). It was included within the kingdom of the *Pâṇḍyas*. (Aiyangar's B.S.I.H., pp. 126–8.)

P. 54. **Melkynda.**—*Neacyndi* of Pliny, *Nelcynda*, of the *Periplus*, *Nincylda* of the Peutinger Tables. Fabricius thinks this name to be connected with *Nîlakaṇṭha* नील-कण्ठ, a name of Śiva. Dr. Caldwell prefers "Melkynda" which he translates "Western Kingdom."

Mr. Kanaksabhai Pillai has shown that the Indian name was *Nîrkunṛam*. It was in the country of the *Pâṇḍyas* as stated in the *Periplus*. It was some ten or twelve miles in the interior with an outer port, at the mouth of the river, named *Vaikkarai*—the Bacare of the *Periplus* (p. 44)

Mr. Schoff notes that *Nelcynda* was probably in the backwaters behind Cochin (9° 58′ N., 76° 14′ E.), the exact location

being uncertain because of the frequent shifting of the riverbeds, sand-bars and islands; but certainly very near the modern *Kottayam* (9° 36′ N., 76° 31′ E.), which is exactly 500 stadia, or 50 miles, from Cranganore (p. 208).

P. 55. **Bammala.**—There is no reason to identify it with the Balita (of the Periplus)—probably mod. *Varkkallai* (8° 42′ N., 76° 43′ E.), a place of considerable commercial importance and celebrated for its temple of *Janârdana*.

P. 57. **Country of the Kareoi.**—Prof. Aiyangar (B.S.I.H., p. 122) states that *Kareoi* stands for Tamil *Karai* or *Karaiyar*, a class of fisher-folk. The pearl-fisheries worked by condemned criminals have been noticed in the *Periplus* (p. 46).

P. 58. **Kolkhoi.**—*Kolkei* or *Korkei* (8° 40′ N., 78° 5′ E.) means 'an army; a camp.' It has been Sanskritized as "Karka" (कर्क). *Kayal* means 'a lagoon.'

Korkei was the cradle of South Indian civilization—the place where, according to tradition, the three eponymous brothers *Cheran*, *Cholan* and *Pâṇḍyan* were said to have been born and brought up, and whence they set forth to form their kingdoms. (Subrahmanya Aiyer's Ancient Dekhan.)

P. 59. **Land of Pandion.**—The country of the *Pâṇḍyas* corresponds to Madura and Tinnevelly (Tiru-Nelveli) districts, Travancore and parts of Coimbatore and

Cochin. It included the chieftaincies of (1) *Aay* (*Aioi* of our author), (2) *Evvi* round about the port of Korkai in Tinnevelly and (3) *Pehan* round the Palnis.

Our author has mentioned *Aioi* as a separate territory and thus Dr. McCrindle notes that 'the author of the Periplus assigns it wider limits.'

Its capital, Madurâ, was evidently so called after *Madhurâ* (मधुरा) or *Mathurâ* (Muttra), the original city of *Pandœ*, the daughter of Heracles who ruled over the region round Muttra (Megasthenes) and migrated from that place to the Southern Madhurâ or Madurâ [C.A.G., pp. 741–743].

P 60. **Orgalic Gulf.**—Orgalic or Argalic is connected with Tamil *Argali*=Skr. *Mahodadhi* (Aiyanger's A.I., p. 60). It has no connection with a place of similar name described in the Periplus as celebrated for muslins. The latter place is Argaru or *Uraiyur*, a part of Trichinopoly.

P. 63. **Country of the Batoi.**—The Tamil word for Batoi is *Veṭṭuvar* (B.S.I.H., p. 122).

P. 65. **Karoura.**—Karûr, a capital of the *Cheras* on the *Kâverî*, the other being Vanji or Tiru-vanjaikkalam (mod. Cranganore, 10 miles E. of Ponnâni in Cochin State).

Khabêris.—This emporium is the *Camara* of the *Periplus* (p. 46), mod. *Kâveripattam*. But Schoff takes it to be *Kârikâl* (10° 55′ N., 79° 50′ E.).

P. 65. **Arouarnoi.**—Its Tamil original is *Aruvalar* (divided into *Aruvânâḍu* and *Aruvâ Vada Talai* or Northern *Aruva*) close to the mouth of the *Krishnâ* river.

P. 67. **Pôdoukê.**—Bohlen, Ritter, Benfy, Müller, McCrindle, Fabricius and Schoff take it to be Pondicherry (=*Pudu Chcheri* "New Town,": 11° 56′ N., 79° 49′ E.). Aiyangar considers it doubtful. Yule and Lassen prefer Pulikat (13° 25′ N., 80° 19′ E.).

Geog. of Anc. Ind.—Pp. 539-40 of the original edition correspond to pp. 617-18 of my edition.

Maisolia.—Masalia of the *Periplus*. The identification of the Maisalos with the *Krishnâ* is almost certain. Its name preserved in Masulipatam (16° 11′ N., 81° 8′ E.).

P. 70. **Jaganntha Katikardama.**—It is a printing mistake. Katikardama is to be taken with the next paragraph with a colon and dash after it.

P. 71. **Dosarôn.**—Dosarene of the *Periplus* (p. 47) is the district through which flows this river. Skr. *Dasârṇa* दशार्ण mentioned by *Kâlidâsa* in the famous passage of the Meghadûta (त्वय्यासन्ने परिणत-फल-श्याम-जम्बू-वनान्ताः सम्पत्स्यन्ते कतिपय-दिन-स्थायि-हंसा दशार्णाः) has been repeatedly referred to in Sanskrit literature and the river flowing through it—*Daśarṇâ* (दशार्णा)—is still known as the Dasân or Dhasan (between the Betwa and the Ken). But that *Daśârṇa* is not on the east coast as

the account of the *Periplus* and of Ptolemy requires. As for the eastern *Daśârṇas* the *Kûrma-vibhâga* of the *Bṛhat Samhitâ* (XIV) and of the *Mârkaṇḍeya Purâṇa* (LVIII, 18) mentions them together with the *Kaṭaka-sthalas* (people of Cuttack ?) and *Śavaras*, etc. Thus their land is Orissa, and most probably it was a colony of the *Daśârnas* on the river Dasan.

P. 71. **Sippara.**—Yule's suggestion that it is *Śûrpâraka* (शूर्पारक) is not to be accepted. *Śûrpâraka*, the abode of *Paraśu-Râma*, was on the western coast and it has been correctly identified with Soupara (p. 40).

The only name with a similar sound with which it can be connected is the *Śûrpakarṇas*, a tribe with 'ears as big as the winnowing-fan,' located in the *Kûrma-vibhâga* of the *Bṛhat Samhitâ* (XIV) and of the *Mârkaṇḍeya Purâṇa* (LVIII) in the eastern division.

(Pp. 75–81) A List of Indian Mountain-ranges.

Ptolemy has mentioned seven mountains only. As for his Ouïndion (*Vindhya*), Ouxenton (*Rikshavant* ऋक्षवान्), Oroudian (*Vaidurya*), and Adeisathron (Adri-Sahya or *Sahyâdri*), we know the Sanskrit names. But that is not the case with the other three.

The **Apokopa or 'Punishment of the Gods'** has been identificd with the

Aravali mountains. 'Apokopa' has been taken to be a Greek word meaning 'what has been cut off.' But my idea is that it is an Indian word which has been turned into the Greek form on account of their similarity of pronunciation. And I identify *Apokopa* with *Apakara* mentioned by Pâṇini in the Sûtra (IV 3. 32) सिन्ध्वपकराभ्याम् कन्. The *P* of the last syllable might have been changed either to give a Greek etymology or it is due to a confusion between "p" and Greek "ρ." As for "Punishment of the Gods," it is connected with *Deva-sabha*, a mountain mentioned in the *Arthaśâstra* of *Kauṭilya* (Mysore edition, p. 78). The *Kâvyamîmâmsâ* refers to the mountain of *Devasabhâ* as the boundary of Western India. (देवसभायाः परतः पश्चाद्देशः । तत्र देवसभ-सुराष्ट्र-दर्शेरक-चवण-भृगुकच्छ-कच्छीय-आनर्तार्बुद-ब्राह्मणवाहयवनप्रभृतयो जनपदा :— p. 93). If it be identified with the Aravali Mountains then the above description suits exactly. A confusion between *sabhâ* and *śâpa* (=curse) caused the foreign writer to describe it as the 'Punishment of the Gods.' I take the Aravali as the Apakara-Devasabha (*Arbuda* being identical with Mount Abu). Skr. *Apakara* = Pkr. *Aara* which represents the first part of the name of *Aravali*.

Bêttigo.—I have traced the Sanskrit (or rather the Sanskritized Dravidian) form

of it in the following Śloka of the *Râja-nighantu*, an Âyurvedic work :—

मलयाद्रि-समीपस्थाः पर्व्वता वेट्ट-संज्ञकाः ।
तज्जातं चन्दनं यत्तु वेट्टवाच्यं क्वचिन्मते ॥

Here we find the location of a sandal-producing *Beṭṭa*-mountain near the Malaya mountains.

Vaidûrya.—This chain has been mentioned in the *Mahâbhârata* (Vana P. LXXXVII, 8343; LXXXIX, 8354–61; CXXI) which states that the Pâṇḍavas in their pilgrimage went from Vidarbha, across these mountains, to the River Narmadâ. Thus the range seems to be the Satpura range or a portion of it.

Vaidûrya means Lapis lazuli and the range was so called evidently because the costly stone was to be obtained there.

(Pp. 81–96) RIVERS OF THE INDUS-SYSTEM.

The river **Sindhu** (Indus) has supplied India with her two names—*Hindu-stan* and *India*. *Sindhu* (or *Sindhu-s* in the Nominative form) was pronounced with H instead of S by the Persians. Now the Greeks borrowed the word from the Persians and wrote it as *'Ινδυς*, there being no *H* in their alphabet. Thus *Sindhu* was changed to *Indus* and from the latter was derived India.

As for the western tributaries of the Indus, Ptolemy mentions the **Koa** and the *Souastos*. The ***Koa*** is the Vedic ***Kubhâ***

(modern Kabul river). *Kophes* of other classical writers has been derived directly from *Kubhâ* (*Rigveda*, X. 75). The form *Koa* comes through the usual Prakrit form of *Kuhâ*. [It has been mentioned as *Kuhu* in the *Kâvyamîmâmsâ*, pp. 93-94.]

The **Souastos** is the *Suvâstu* (सु-वास्तु "Good Dwelling") of the *Rigveda* (VIII, 20, 37), *Pâṇini* (IV. 2. 77) and the Epic and Purânic Literature.

As it has been mentioned in the Rigveda as *Suvâstu*, the *Śvetî* of the *Nadî-stuti* (Rigveda, X. 75) seems to be a separate river. It seems to be a river having for its source the *Śveta*-mountain or *Safed-koh*.

Bidaspês (Hydaspes of other classical writers) *Vitastâ* (*Vitasthâ* or *Vitasthânâ* of the Vedic Literature) is now known as the Jhelum—probably derived from *Jalam* (=water). [V. de Saint Martin in his Geographie du Veda, pp. 33-34.]

The **Sandabal** (Sandabaga ?) stands for the *Chandrabhâgâ* (चन्द्रभागा)—the modern Chenâb—the Vedic *Aśiknî* ("black") and classical *Akesines*.

The **Adris** *or* **Rhouadis** is the *Irâvatî* (इरावती, modern Râvi) which was known in the Vedic age as Parushṇî (परुष्णी).

The **Bibasis** is the *Vipâśâ* (Beas) also spelt as Vipâṭ (in the Vedic Literature and Amarakoṣa, I, ii, 3). Yâska notes that it was also known as *Uruñjirâ*.

The **Zaradros** is the Satlej. The Vedic form of its name is *Śutudrî* (Rigveda,

X, 75). The later forms are *Śitadru* (Amara-kosha, I, ii, 3) Śatudrî and *Śatadru*, the last one being the common form in the later Literature.

(Pp. 96–102) THE GANGES AND HER TRIBUTARIES.

The **Diamunâ** is the *Yamunâ* (यमुना from यम "twin")—modern Jumna.

The *Sarabos* is the *Sarabhu* of Pali literature (Vinaya, Chulla., 9, 1, 3 and 4; Milinda, 4, 1, 35), Sanskrit *Sarayu* and modern Ghogra. The Greek and Pali spelling clearly indicates that the original form was *Sarabhu*. Sarayu comes through the Pkr. form of Saraḫu. The modern name of Ghogra is to be connected with an Onomatopœic name of *Gharghara* which has been used, in the *Matsya Purâṇa* (XXII, 35 of the Bangabâsî Ed.), for this river.

The **Soa** is the *Śoṇa* (शोण) also called *Hiraṇyavâha* (Bâṇabhaṭṭa)—the *Erannaboas* of Arrian.

P. 100. The **Damudâ**.—It is the Dâmodar.

(Pp. 102–104) OTHER RIVERS.

The River **Namados** is the *Narmadâ* (नर्म्मदा) which rises in the Ouindion or *Vindhya*.

The **Móphis** is the Mahi.

The **Nânâgouna**—(नानागुणा?). The Tâpti (?); see p. 48.

The **Goaris** has been identified with the *Godâvarî* (Pkr. Goâari).

The **Bindâ** is, according to Yule, the *Bhîmâ*.

As for the other rivers, they have been already noticed, the *Pseudostomos* in p. 52, the *Baris* in p. 53, the *Sôlên* (Tâmraparṇî ?) in p. 59, the *Khaberos* (Kâvery) in p. 65, the *Tyna* in p. 66, the *Maisalos* (Krishnâ) in p. 67 (and notes), the *Man-(a)da* in p. 69, the *Toundis* in p. 70, the *Dosâron* and the Adamas in p. 71.

(Pp. 104–187) THE TERRITORIES AND PEOPLES OF INDIA CLASSIFIED ACCORDING TO RIVER-BASINS.

P. 106. The **Lambatai** (to be corrected into *Lambagai*) near the source of the Koa (*Kubhâ* कुभा) or the mod. Kabul river are the *Lampâkas* who were also known as the *Muruṇḍas* (and not Muraṇḍas) [लम्पाकास्तु मुरुण्डाः स्युः; Hemachandra's *Abhidhânachintâmaṇi* IV, 26] mentioned in the Allahabad Pillar Inscription of Samudra-Gupta. Dr. Sten Konow has pointed out that *Muruṇḍa* is the later form of a Śaka word meaning lord, master. *Lampâka* was thus the capital of the *Śakas*.

The **Suvâstu** ("Good Dwelling") has already been noticed. It is Yüan Chwang who records *Su-po-fa-su-tu* as the name and it corresponds to *Śubha-vâstu* (शुभ-वास्तु); "*Su*" means the same as *Śubha*, but it is not a contraction of the latter. The meaning of the word *Su-vâstu* would indicate that it was rather much more applicable to the district than to the river. And *Parâśara* (quoted by

Utpala on *Bṛhat Samhitâ* XIV) mentions it rather in a list of nations and countries. As far *Udyâna*, read C.A.G., pp. 93, 678.

P. 107. The **Daradrai** are the *Daradas* (दरद)—the modern Dards of Dardistan. Ptolemy has added the second "r" wrongly.

As for the '**gold-digging ants**' of Herodotos, and Megasthenes, they have also been mentioned in the *Mahâbhârata*:

मेरु-मन्दरयोर्मध्ये शैलोदामभितो नदीम् ।
ये ते कीचकवेणूनां छायां रम्यामुपासते ॥ . . .
पारदाश्च कुलिन्दाश्च तङ्गणाः परतङ्गणाः ।
तद्वै पिपीलकं नाम उद्भृतं यत् पिपीलकैः ।
जातरूपं द्रोणमेयमद्दार्षुः कृच्छ्रगा नराः ॥

(Sabhâ P. LXXVIII, 78–80; Krishnacharya's edition).

P. 108. **Manasarô-vara.**—Read *Mânasa-sarovara* (Lake Manas).

Kaspeira is, undoubtedly, Kaśmir. Sir A. Stein has shown that Ptolemy has wrongly located it (the city) on the lower course of the Rhuadis (or Adris—modern Ravi) [Stein's Eng. Tran. of the *Râjataraṅgiṇî*, vol. II]. Stein's researches clearly indicate that the historical value of the earlier books of the *Râjataraṅgiṇî* is very little and as such we are not sure whether Kaśmir was ever so big as Ptolemy makes it to be.

P. 109. Read **Mêghavâhana** for **Mêghâvahana.**

The **Kylindrine** near the sources of the *Vipâśâ*, the *Śatadru*, the *Yamunâ* and the *Gangâ* is the land of the *Kulindas* or

Kunindas (*Vâyu*, II, 36, 106) who are, according to Cunningham (Arch. Surv. Rep. XIV, 116, 125–30), the modern Kunets who occupy Kullu and the Simla hills and the slopes below, along both sides of the Sutlej. The description of the *Mahâbhârata* as to the conquest of Arjuna (Sabhâ P. XXV, 996; LI, 1858–9; and also Vana P. CLXXVII, 12350) indicates that the Kulindas extended further east along the southern slopes of the Himalayas as far as Nepal. A few of their old coins also have been discovered.

P. 110. **Goryaia** or the territory of the *Gureans* invaded by Alexander was washed by the R. Gouraios—the *Gaurî* (गौरी) of the *Mahâbhârata*—the modern R. Panjkora. To the E. of this river was the Assakenoi, the *Aśmaka* (अश्मक) of *Pâṇini* (IV. 1. 173).

P. 112. **Kaisana.**—Read C.A.G., pp. 31–35 (of my edition). As for **Barborana**, it seems to be identical with *Varvara*, *Barvara* or *Barbara*, the name of a nation mentioned with the *Daradas* in the *Mârkaṇḍeya Purâṇa* (LVII, 39) and with the *Śakas* and *Yavanas* in the *Mahâbhârata* (Sabhâ, XXXI, 1199; Vana, CCLIII, 15254, etc).

P. 113. **Nagara.**—Fa Hian (Chap. XIII) calls it *Nagara*.

The Records of Yüan Chwang name it Na-ki-lo-ho="Nagarakot" (according to Watters, vol. I, pp. 182–7) which has been mentioned by Alberuni (vol. II, p

11). The Skr. name of *Nagarahâra* occurs in the *Parâśara Tantra* (quoted by Utpala in his commentary on *Bṛhat Samhitâ* XIV) and in a *Pâla* record (*Gauḍalekhamâlâ*, vol. I). It was, according to Yüan Chwang, subject to Ka-pi-shih—Skr. *Kâpiśî* (कापिशी mentioned in Pâṇini IV. 2. 99 as famous for its grape-wine, *Kâpiśâyanî Surâ*, referred to in *Kauṭilya's Arthaśâstra*, Book II, Chap. XXV). Thus the original name is (कापिशी) *Kâpiśî*, and not *Kapisâ* which is being used (on the authority of classical writers) since the days of Cunningham.

P. 115. The **Gandarai.**—The oldest form of the Skr. name is *Gandhâra* (गन्धार of the *Ṛgveda*.) The later form is *Gândhâra* (गान्धार). The old Persian form of the name was Ga(n)dâra [Camb. H.I., p. 327]. Its oldest capital was *Pushkalâvatî* which is said to be so named after *Pushkala*, a son of *Bharata*, the brother to *Râma*. [तत्तं तक्षशिलायां तु पुष्कलं पुष्कलावते। गन्धर्व्वदेशे रुचिरे गान्धारविषये च सः॥ *Râmâyaṇa, Uttara-kâṇḍa*, CXIV, 11]. It is the Proklaïs of Ptolemy. It has been identified with Charsada [described in C.A.S.R. II, p. 90; XIX, pp. 96–110; A.R.A.S.I. 1902–3, pp. 140–154], one of the *eight cities* of "Hasht-Nagar." The other capitals of *Gândhâra* were *Purushapura* (mod. Peshâwâr), the capital of Kanishka and *Udabhâṇḍapura* (उद्भाण्डपुर) or Waihand (Ohind) mentioned by Alberuni.

P. 118. **Arsa.**—Skr. *Uraśâ* (उरशा), the *Arsakes* of Alexander's Historians, the Wu-la-shi of Yüan Chwang and the modern district of Hazara to the W. of Kashmir. [Sir A. Stein in his Topography of Kashmir appended to the second vol. of his Translation of the *Râjataraṅgiṇî*.] Ptolemy states that one of its cities was Taxiala—Skr. *Takshaśilâ* (तक्षशिला). The name is derived from that of *Taksha*, a son of *Bharata* the brother to *Râma*. [The passage of the *Râmâyaṇa* has already been quoted under Pushkalâvaṭî.] But these two sons of *Bharata*, *Taksha* and *Pushkala*, are rather shadowy persons and as such we are not sure as to the actual historical character of these two eponymous heroes. The word *taksha* means 'to cut off' and Pali "Sila" (from Sanskrit *Śiras*) means 'head' and this popular etymology explains the Buddhist legend that the place is so called because Lord Buddha made an alms-gift of his head in this place. *Śilâ* means "rock" in Sanskrit and so the word may mean "Hewn Rock"—it being built of that material instead of brick and mud. The other plausible derivation of the word is to take it as "the Rock of *Taksha*(*ka*), King of the *Nâgas*, who killed *Parikshit*. This account is supported by the facts that the *Mahâbhârata* (Âdi P. III, 682-3; 832-4; XL-XLIV; XLIX, 1954; L, 1991) states that *Janamejaya*, the son of

Parikshit (evidently to retaliate the death of his father) invaded *Takshasilâ* and conquered it and that the *Takkas* (who held all the country around it and are now to be found in Jammu, Kistwar, etc.) claim their descent from *Takshaka Nâga*. The biting by Takshaka thus, probably, symbolises the destruction of *Pândava* power owing to the inroads of the *Takkas* whose stronghold was *Takshasilâ*. [Tod in p. 9 of his Râjasthân records the Takkas' descent from *Takshaka*; Cunningham in A.S.R., II, p. 6, notes their modern habitation.]

The city has been identified by Cunningham with the ruins near *Shah-dheri* (which means 'Royal Residence') about 12 m. N.W. of Rawalpindi. Here have been found colossal statues, thousands of coins, traces of at least 55 *stûpas*, 28 monasteries, 9 temples, a copper-plate containing the name of Takshaśilâ and a vase with *Kharoṣṭhî* inscription " the tope was erected at Taxila—" [C.A.S.R., II, pp. 111–35; III, 135; V, 66–75; XIV]. The ruins cover several miles and stretch up to Hassan Abdal (Attock district, Punjab). It has been recently excavated. [Annual Rep. A.S.I., 1912-13, pp. 1–5, *ibid*, Part I, pp. 8–16; 1915-16, Part I, pp. 10–12.] Sir John Marshall's Guide to Taxila describes the remains of three distinct cities located in the same valley watered by the Haro river. These are

situated immediately to the E. and N.E. of Saraikala, a junction on the railway, 20 miles N.W. of Rawalpindi.

Dr. McCrindle is not correct in his statement that Alberuni makes no mention of this place. Alberuni has, in his 29th chapter, mentioned *Takshasilâ* (in his account of the *Kûrma-vibhâga*) and remarks that 'it is Mârikala.'

P 121. The **Pandoöúoi** (*Pâṇḍavas* ?) on the *Bidaspes* (*Vitastâ*, Jhelum) are not known from any Sanskrit source, save a corrupt passage of the *Mârkaṇḍeya Purâṇa* where the *Pâṇḍyas* have been mentioned together with the *Kâmbojas*, *Daradas*, etc. [LVIII, 32].

P. 122. **Saǥala.**—Skr. *Sâkala* (Pkr. *Śâgala*) is not identical with the Sangala of Alexander's Historians. *Sangala* has been referred to by Pâṇini as *Śânkala* (IV, 2. 75). It was to the E. of the Hydraotes or the Râvi as Arrian and Curtius have noted. Whereas *Śâkala* was, as the *Mahâbhârata* (Karṇa P. VII) clearly states, to the W. of the Râvi. Some authorities place Sangala in Gurdaspur district (Lahore Division). [Imp. Gaz. Ind. XII, p. 393.] But Prof. Bevan notes that the site is uncertain and that Anspach conjectures Jandiâla. [Camb. H.I., p. 371.]

As for the identification of *Śâkala* (Pk. *Sâgala*) or Sagala of Ptolemy, Cunningham himself has recorded (C.A.S.R. XIV, pp. 44–46) that a Brahmin of Sial-

kot informed him that Sial-kot was originally called *Śâkala*, the capital of *Bâhîka* country. The name Sial-kat was connected with the name of Râja Sâla (शल्य the brother to Queen Mâdrî, the step-mother of Yudhiṣṭhira), the maternal uncle of the *Pâṇḍavas*. On the authority of this local tradition it (Sial-kot—the Kot or fort of *Śalya*) has been identified with *Śâkala* (Dr. Fleet in the Proceedings of the 14th Oriental Congress.)

P. 124. **Boukephala.**—The long passage beginning with the last line of p. 124 up to the 10th line of page 126 has been misplaced. Read it just after the 8th line of p. 124.

Cunningham located *Boukephala* at Dilawar opposite Jalâlpur (C.A.G., p. 192). V. Smith located it at Jhelum. Here have been discovered many old coins, but not earlier than those of the Indo-Scythian period, three iron tripods of Greek form, etc. (C.A.S.R. II, pp. 174–175; XIV, pp. 41–42). A point in its favour is that it is higher up and Alexander seems to have kept close to the hills. 'But it is not possible to decide the question with our defective documents.' (Camb. H.I., p. 361.)

P. 124. **Kaspeiraioi.**—Read notes on Kaspeira in p. 108.

P. 126. **Labokla.**—The account of the partition of Râma's empire as contained in the *Râmâyaṇa* and the description of the cities of Râma's sons and nephews make it

clear that Lava's city cannot be identified with Lahore. [*Râmâyaṇa*, Uttara, C–CVIII.]

P. 128. **Thaneswar.**—Its Skr. name, as supplied by *Bâṇabhaṭṭa* (in his *Harsha-charita*) is *Sthâṇvîśvara* (स्थाण्वीश्वर) from *Sthâṇu* (God Śiva) + *Îśvara* (Lord). Yüan Chwang describes Thaneswar as the westernmost country of the Buddhist Middle Country, whereas *Divyâvadâna* and *Mahâvagga* (V. 13, 12) mention *Sthuna* or *Thuna* (a Brahman village or district) as its western boundary. Hence I identify the two. *Sthuna* and *Sthâṇu* seem to be different forms of the same word. Such metathesis of vowels is found in Pali; or rather it has been done to have some meaning ascribed to *Sthuna*. And when it is *Sthâṇu*, it is natural to add the word *Îśvara* to it.

P. 128. **Indabara.**—The intermediate stages to derive it from Skr. *Indra-prastha*, are Pkr. *Inda-baṭṭha* (and not Indra-baṭṭha) and *Inda-bâḍha*.

P. 129. **Modoura.**—It is Sanskrit *Madhurâ* (so named after the *Daitya*-chief *Madhu* who and whose son *Lavaṇa* reigned here before its conquest by *Śatrughna*, the brother to *Râma*. [Hari V., LV, 3061–3; 3083–96; XCV. 5243–7, *Ramâyaṇa*, Uttara, XXV, CVIII. etc.] *Mathurâ* is the *Paiśâchî* Pkr. form of it, though it has been re-introduced into Sanskrit and is the form in actual use.

Madhurâ was the capital of the country of the *Śûrasenas* which was to the south of *Indra-prastha* (Mahâ Bh., Sabhâ P. XXX. 1105–6).

P. 130. **Jaṭi-dhara.**—The correct spelling is *Jaṭâ-dhara* mentioned in the *Kûrma-vibhâga* (*Bṛhat Samhitâ*, XIV) but not in this locality. A word of similar meaning is the *Dîrgha-keśas* and they have been located by *Varâhamihira* here.

P. 131. **Batangkaissara.**—Cunningham (C.A.G., p. 379) corrects the first letter (*B*) to *S* and identifies it with Thaneswar (*Sthâṇ*; *vîśvara*).

Passala.—I identify it with *Prasthala* mentioned in the *Mahâbhârata* (*Virâṭa* XXX, 971; Bhîshma LXXV, 3296-LXXXVIII, 3856; Droṇa, XVII, 691, etc.) in such a way that it seems to have been the district between Ferozpore, Pattiala and Sirsa. The *Prastalas* (a northern nation) have been mentioned by *Parâśara* also. (Utpala's Com. on *Bṛhat Samhitâ*, XIV.)

P. 132. **Nanikhai.**—The word may be connected with *Naimisha* (नैमिष) or *Naimishâraṇya*—modern *Nimkhar* on the Goomti (Go-matî, गोमती) some 20 miles to the S. of Sitapur 27° 20′ N., 80° 35′ E. The Skr. *sh* (ष) is represented by *kh*—a *Vâjasaneyin* peculiarity of pronunciation preserved by the *Maithils* of North Bihar and in some parts of U.P.

P. 133. **Adisdara.**—The oldest Skr. name as sug-

gested by the Greek form and actually preserved in an old inscription (Index to Lüder's List of Brâhmî Inscriptions) is *Adhi-chchhatra*. *Adhi* was afterwards changed to *Ahi*, according to the rule of Prakrit phonetics. It has been correctly identified with Râmnagar (20 m. W. of Bareilly, U.P.).

P. 136. **Indo-Skythia** is that part of north-western India which was under Skythian (Śaka) rule. Ptolemy mentions three provinces of it—*Patalêne*, *Abiria* and *Syrastrene*.

P. 139. For **Abiria** (आभीर) and its identification with Ophir see notes on p. 40.

P. 141. **Po-na** or **Fa-la-na.**—The Sanskrit name is *Varṇṇu* (वर्ष्णु) ref. to in *Pâṇini* IV. 2. 103; IV. 3. 93. It is the modern territory of which Bannu is the natural and political centre. (See my notes in C.A.G., p. 679.)

P. 143. **Aornos.**—Read V. Smith's E.H.I., 2nd Ed., Appendix D. The Cambridge History of India (vol. I, p. 356) notes 'it was not far from modern Amb.' Dr. Stein explored (in 1904-5) the hitherto inaccessible mountain tract of the Mahaban range. His survey proved beyond all questions that the natural features of that moutain are totally dissimilar from those of Mount Aornos as described by the historians of Alexander. (Annual R.A.S.I. for 1904-5, p. 42.)

P. 146. **Patala.**—It was, according to V. Smith,

at or near the very ancient site of Bahmanabad (20° 50′ N., 68° 50′ E.).

P. 148. **Barbarei.**—It is the *Barbaricum* of the *Periplus*—a great emporium of coral trade. This name is, in the opinion of Mr. Schoff, the Hellenised form of some Hindu word. Now we know that this part of the country was occupied by the *Barbaras* mentioned in the *Purâṇas*, the *Mahâbhârata* [Mârkaṇḍeya, LVII, 39; Mahâbh., Sabhâ XXXI; 1199, etc.] and the *Bṛhat Samhitâ* as a northern or a north-western nation. The commentary on *Kauṭilya's Arthaśâstra* mentions (1) the river *Srotasî* of the *Barbara* country, (2) and a lake named *Śrîghanta* in a corner of the sea of *Barbara* and adds that the river was a source of pearls and that *Alakanda*, famous for corals, stood on the above river. (*Arthaśâstra*, Eng. Translation, p. 86, ft. notes 7, 8, p. 90, etc.)

Now by combining these bits of information we find that the country of the *Barbaras* was in the W. or N.-W. frontier of India and that it stretched up to the [Arabian] Sea. Through it flowed a river named Srotasî. In it was a lake not far from the sea; and Alakanda (< Alakshandrâ, *Αλέξανδρεα*) stood at the mouth of the river.

The above description of *Alakanda*, famous (according to *Kauṭilya*) for corals, fits well with that of 'Alexander's Haven.'

Dr. V. Smith has shown (in his E.H.I.), on the authority of Major Raverty, that the large lake at the mouth of the river where stood 'Alexander's Haven' still exists and is called Samârâh. [E.H.I., 2nd Ed., pp. 101–3, and specially the foot-notes.]

The above facts and identity of names lead me to identify 'Alexander's Haven' with the *Alakanda* of *Kauṭilya* and the *Barbaricum Emporium* of the *Periplus* which stands for *Barbarika* or (the port) of the *Barbara* country. The latter name came to be used instead of *Alakanda*, because of the confusion caused by the use of *Alakanda* which was used for the other Alexandrias also. 'Barbarika' as the name of a place is not a theoretical word formed by Sanskritizing Barbaricum. It actually occurs in the *Dhanvantarîya Nighanṭu*, an Âyurvedic work, whereas the *Râjanighanṭu* mentions *Barbara*. [Kabirâja Birajâ Ch. Gupta's *Vanaushadhi-darpaṇa*, vol. I, pp. 283-84.]

V. Smith notes that 'Alexander's Haven' was not very far from the modern Karâchî (Kurrachee).

P. 151. **Panasa.**—The name is certainly to be connected with Skr. *Parṇâśâ* (पर्णाशा)—the modern R. Banâs, a stream rising near Mt. Âbu and flowing into the Rann of Kachh. The city was probably near the mouth. [There is another Parṇâśâ, a tributary of the Chambal.]

P. 152. **Binagara.**—It has been taken to be identical with the *Minnagara* of the *Periplus* (Schoff, p. 37). *Minnagara* was a name given temporarily to several cities of India during the period of the occupation of the Scyths (the Śaka and allied tribes). After the collapse of the Indo-Skythian power these cities resumed their former names with their autonomy (Schoff, p. 165). This Minnagara may be identified with Bahmanâbâd, 25° 50′ N., 68° 50′ E.

Note that Dr. McCrindle is wrong in stating that Cunningham would identify it with Alor; for the latter identified it with Ṭhaṭha (C.A.G., p. 330).

Barygaza.—(*Bhṛgu-kachchha*—mod. Bharoch) on the Namados (*Narmadâ*), the city of **Larikê** (Lâṭa लाट) has already been noticed. [Notes on p. 38.] The *Periplus* states that it *exported* spikenard (Skr. जटामांसी), costus (कुष्ठ) and a few other spices, ivory, agate, cotton and silk cloth, etc., and *imported* wine (Italian, Laodicean and Arabian), copper, tin, lead, coral, topaz, thin clothing, antimony, gold and silver coins, etc., and as *presents for the king*, costly vessels of silver, singing boys, *beautiful maidens for the harem*, etc. [Schoff's Ed., p. 42.] A passage of the Mahâbhârata (Sabhâ, LXXVIII, 35-36 of Krishnâcharya's Ed. शतं दासी-सहस्राणि कार्पासिकनिवासिनाम्। श्यामास्तन्वीः दीर्घकेश्यीः हेमाभरण-भूषिताः। वलिं च क्षत्त्रमादाय भारुकच्छो

नरर्षभ।) seems to support the statement of the *Periplus* that Barygaza was the centre of importing white slaves.

P. 154. **Ozene.**—Skr. *Ujjayinî* ('Victorious'), mod. Ujjain (20° 11′ N., 75° 47′ E.; in Gwalior State). It was famous for its celebrated temple of *Mahâkâla* also called *Kâlapriyanâtha*. (The Cambay Plates, E.I., vol. VII, show that *Kâlapriyanâtha*, mentioned by *Bhavabhûti* in his dramas, is to be located here). It was the capital of *Pradyota*, the father of *Vâsavadattâ*, and of his family, and then of the viceroys of the Mauryas. The *Periplus* (Schoff's Ed., p. 42) states that it was formerly a royal capital. Ptolemy informs us that it was the capital of Tiastenes (*Chastana*). The descendants of him are known as the Śaka Satraps. They were conquered by Chandra-Gupta II, Vikramâditya, the son of Samudra-Gupta. In Yuan Chwang's time *Ujjayinî* was the capital of the *Kaṭachchuris*. Then we find the *Paramâras* who governed it down to the time of its Moslem conquest.

P. 156. **Minagara.** (Read the notes on *Binagara* in p. 152.)—This is the second Minnagara of the *Periplus* (p. 39). It was identified by Müller with the modern Indore. V. Smith located it at the ancient town of *Madhyamikâ* or Nâgarî, about eleven miles north of Chitor (24° 53′ N., 74° 39′ E.). [Schoff, p. 180.] This is an old site no doubt, but there is no proof of the

identity. Prof. D. R. Bhandarkar identifies this Minnagara with Mandasor, the first part of which seems to preserve the name of the Mins, whereas the second part (Dasor) stands for Skr. *Daśapura* (Ten cities, i.e., a town of ten suburbs), mentioned in many epigraphic records and famous for its 'Sun-temple' and Yaśodharman Pillar inscriptions. Prof D. R. Bhandarkar takes it to be the capital of Nahapâna. (I.A., 1918, pp 77-78; 1926, p. 143.)

Nasika.—Nâsik is on the upper valley of the Godâvarî river. It is the *Nâsikya* of the *Mahâbhâshya*. (I.A., 1893, p. 113; 1894, p. 28.) The name is said to be derived from the fact that the *nâsikâ* (nose) of *Śûrpa-ṇakhâ* was chopped off here, it being the *Panchavaṭî* of the *Râmâyaṇa*. [But Mr. Pargiter, in his Geography of Râma's exile, has shown that the *Panchavaṭî* is to be located somewhere else—J.R.A.S., 1894, p. 231 *ff*.] Some five miles to the south of it is Pandu Lena or the '*Triraśmi*' hill with a series of Buddhist caves with many inscriptions of the *Andhras*, *Kshatrapas* and others. [E.I., VIII; C.A.S.R., IV; Archæological Survey of India, N.I.S., vol. XVI, p. 45.]

P. 157. **Pulinda.**—The Pulindas have been located to the S. and W. also [*Mârkaṇḍeya*, LVII]. They are the aboriginal tribes occupying portions of the Aravalli hills.

The **Kathaioi** were the *Kanthas* (*Pâṇini* II, 4, 20) or the *Krathas* (*Mahâbhârata*, VIII, 85, 16). To take it as '**Kshatriyas**' as has been done by Dr. McCrindle and in the Camb. H.I. (vol. I, p. 371) is not very satisfactory. For the word *Kshatriya* does not refer to any particular nation or tribe, but is the common name for all the warrior tribes or castes.

As for *Sangala* and *Śâkala* see notes on p. 122. The *Madras* (मद्राः) or *Bâhîkas* (वाह्रीक, from वह्रिस्,—the outsiders, i.e. those who live outside the Land of the Aryans) were the tribes whose capital was *Śâkala* or Sialkot. [Mahâbh., Karṇa P., VII.]

P. 158. The **Tabasoi** are the *Tâpasas* mentioned in the *Vâyu Purâṇa* (II, 36, 106 of the 'Bibliotheca Indica' series) and *Kûrma Purâṇa* (Bangabasi Ed., CXIV, 49) as a western nation. Does it mean 'those who dwell on the banks of the *Tâpasî*'? And is *Tâpasî* an old form of the *Tâpî* or Taptî? The locality is not one of such sanctity as to account for a colony of *ascetics* (*tâpasas*) there. Hence I make this suggestion.

Prapiôtai.—The name seems to be connected with *Pâripâtra*, the western part of the *Vindhyas*.

P. 159. **Rhamnai**.—They were probably the *Ramaṇas* of the *Mahâbhârata* (Sabhâ P., IX, 374) who seem to be identical with the

Ramaṭas or *Ramaṭhas*—a northern nation (Matsya CXIII, 42; Vâyu, XIV, 117), who seem to have migrated later.

P. 160. **Kandaloi.**—Yule identifies the word with *Kuntala*. The *Kuntalas* have been mentioned in the *Bhîṣma Parvan* list of the *Mahâbhârata* thrice and it seems that there were three nations of the same name. One probably occupied the country near Chunar (S. of Benares) which Cunningham calls *Kuntila* (C.A.S.R., XI, 123). Others were in the south. The word was, later, used in its wider sense, (e.g. *Kuntala empire*) to include the whole of the Dekkan plateau from the Satpura.

Ambastai.—The word is undoubtedly identical with Skr. Amba-shṭha (अम्बष्ठ). An *Ambaṣṭha* king has been referred to in the *Aitareya Brâhmaṇa* as the performer of an *Aśvamedha* sacrifice. *Pâṇini* (VIII, 3, 97) also has mentioned them. Arrian locates the *Abastanoi* on the lower Akesines (Chinab). The *Mahâbhârata* (Sabhâ P., LII, 14-15) mentions them along with the *Śivis*, *Kshudrakas*, *Mâlavas* and other north-western tribes. They migrated, in a later period, to the neighbourhood of Maikal hills (मेकल)—the source of the Narmadâ—for the *Kûrmavibhâga* of the *Bṛhat Samhitâ* (XIV), and *Parâśara* (quoted by Utpala in his commentary on the above) mention them with the *Mekalas*. [The corresponding passage of the *Mârkaṇḍeya Purâṇa* corrupts मेकलाम्बष्ठ to मेखलामुष्ट)

And Ptolemy also locates them in the same place. Thence they have dispersed themselves to Bengal where they can still be traced.

In the *Ambaṭṭha Sutta* (translated in the Dialogues of the Buddha, Part I) an *Ambaṣṭha* has been stated to be a Brahmin associated with a teacher *Pushkarasâdî* ('Inhabitant of *Pushkalâvatî* or Peukelaotis.' See p. 115). The reference in the *Aitareya* and Arrian would make them *Kshattriyas*. It thus seems that they were a tribe of *Brahma-Kshattriyas* (i.e. Brahmins by birth and Kshattriyas by profession), a word which actually occurs in the Deopâḍâ inscription of Vijayasena, who is claimed by the *Ambaṣṭhas* of Bengal as one of their own caste.

P. 161. **Adeisathra.**—McCrindle takes this to be the second *Ahichchhatra*. But we do not know of a second *Ahichchhatra* from any authoritative source. The word stands for Skr. *Adri-stha* (अद्रिस्थ) or 'mountain-dweller' and seems to be identical with the *Adraistoi* located by the historians of Alexander on the eastern side of the Hydrates or Ravi. [In the Camb. H.I. (vol. I, p. 371) it has been taken to stand for अधृष्टाः *Adhṛṣṭas*.] The *Adraistoi*, the *Mâlavas* and the *Ambaṣṭhas* were in the Punjab during the period of Macedonian invasion; but they migrated thence afterwards—most probably because they were displaced by the later invaders—the

Śakas, Yuchis, Pathrians and others. [See notes on p. 165.]

P. 163. **Bharâod.**—It is Bharaut famous for its Buddhist sculpture removed to the Calcutta Museum.

P. 164. The **Paramâras** are not of the same stock as the *Pauravas* (of *lunar* family). The traditional account of their origin is that their progenitor sprang from the body of the sacred cow of Vasiṣṭha while she was being carried away by Visvâmitra. [मारयित्वा परान् धेनुम् स्वानिन्ये स ततो मुनिः। उवाच परमाराख्यः पार्थिवेन्द्रो भविष्यति.] He is sometimes said to have sprung from an *Agni-Kuṇḍa* (fire—जज्ञे वीरोऽग्निकुण्डात् रिपुकुलनिधनं यश्चकारैक एव) to save the cow. [Paramâra Inscriptions and Parimala Padma-Gupta's *Nava Sâhasânka Charita*.]

P. 165. **Adeisathroi.**—Dr. McCrindle has remarked (p. 161) that Ptolemy has disjoined *Adeisathra* from the territory of the *Adeisathroi*. Now I am sure that Ptolemy disjoins them, because there is no real connection between the two. That different words assume the same form is one of the rules of Etymology.

Adeisathra is, as I have already remarked, अद्रिस्थ *Adri-stha* ('mountain-dweller'), whereas Mt. *Adeisathros* being the source of the Khaberis (*Kâverî*) is certainly a portion of the Western Ghats, though misplaced by Ptolemy. Hence *Adeisathros* is *Adri-Sahya* or the *Sahyâdri* (सह्याद्रि). *Adei* stands for *adri* in both the

cases. *Sathros*, in the second case, stands for *Sahya*. Ptolemy has, very often, tried to restore the original mute aspirate softened into **h** in Prakrit and sometimes even in Sanskrit. Thus Aḫi-chchhatra is the Aḍisdara of Ptolemy; the river Maḫi is the Mophs, the Sarayu (y for the ḫ elided —the *Ya-śruti*) is the Sarabas. And here also, on the same analogy, he replaces the ḫ of Saḫya by th. Compare also Brakhmanai for Braḫmaṇa in p. 170. As for the r, it has been inserted wrongly—it being a peculiarity of Ptolemy. (Cf. p. 107, Daradṛai for *Darada*; p. 109, Kylindṛine for Kulinda, p. 116, Proklaïs for *Puṣkalâ(vatî)*; p. 185, Pityndṛa, etc.)

As the Adeisathros chain has been displaced, it is very difficult to locate the five towns mentioned by Ptolemy in § 71, and the identifications proposed in p. 166 are very doubtful. But if **Panassa** is really to be located somewhere in Central India then, I would like to connect it with the River *Parṇâśâ*—the modern Banas, a tributary of the *Chambal*—and the city is to be located on that river. [For another Panasa, see notes on p. 151.]

P. 168. **Mandalai.**—The only way to evade the difficulty of including *Pâṭaliputra* (Patna), the Palimbothra of Ptolemy, within the dominions of *Mandalai* is to take the word, not as the name of the Province of Ṃandalâ (a city on the *Narmadâ*), but as the Sanskrit word *Maṇḍala* (मण्डल) of a

Maṇḍaleśvara (the Lord of an empire). *Pâṭaliputra* was, after the Kâṇva dynasty, included within the *Maṇḍala* (or dominion) of the *Andhras* or the *Sâtakarṇis* who controlled the kingdom of Magadha for a time. And Ptolemy seems to record here this fact in this vague way. Thus he (being a foreigner) was not able to distinguish between a proper noun and a common noun and has used the word "Empire" (*Maṇḍala*) as the name of a district which was included within the 'Empire.'

P. 169. **Sambalaka.**—Sambalpur, headquarters of the district of the same name in B. & O.

P. 169. **Palimbothra.**—The Skr. form is *Pâṭalîputra*. The modern name of *Pâṭnâ* comes from the word *Pattana* ('city') and has no etymological connection with Pâṭaliputra. Lt.-Col. Waddel has shown (in his 'Report on the Excavations at Pâṭalîputra,' Calcutta, 1903) that nearly the whole of the site of the city is intact; much lies below Patna, Bankipur and the E.I. Railway, being buried at a depth of ten to twenty feet. The old city was on the north bank of the old Śoṇa, but it was several miles distant from the Ganges which shifted later to the south. Dr. Spooner's excavation (1912-13) has resulted in the discovery of traces of the Maurya "Hall of a Hundred Columns." (Annual Report A.S.I., 1912-13, Part I, pp. 24–27; 1912-13, pp. 53–86.)

P. 170. **Brakhmanai Magoi.**—Noticed already. (Notes on p. 51.) The *Magas* (मगाः Gr. *Magos*, Lat. *Magus* in singular, *Magoi*, *Magi* in the plural) were, according to the Indian tradition recorded in the *Purâṇas* (*Kûrma* XLVIII, 36; *Mahâbhârata*, *Bhîṣma* P. also refers to them as Mangas), the *brâhmaṇas* (i.e. priests) of the *Śâka-dvîpa* (Śaka-land). Herodotus (I, 101) states that the Magi were one of the six tribes of the Medes. Prof. Moulton informs us that they were indigenous in the country where the Aryans (Zoroastrians) were immigrant conquerors, and that eventually they became the priests of Zoroastrianism wherein they introduced two of their own (Magi) customs—(i) the *Dakhmas* or "Towers of Silence" on which the bodies of the dead are exposed till the vultures have stripped the skeletons bare and (ii) marriage between the closest kin—a religious duty of the most extravagant sanctity. [Prof. Moulton's Early Religious Poetry of Persia, pp. 75–77.] Now the Indian tradition [recorded in the *Mahâbhârata Bhîshma* P. VII; मिथुनं—man and wife—जायते काले समं तच्च प्रवर्धते—born and brought up together, i.e. are brother and sister; भारुण्डा नाम शकुनाः (vultures) तीक्ष्णतुण्डा महाबलाः। तान् निहरन्तीह मृतान् दरीषु प्रक्षिपन्ति च ॥] ascribes the above two customs to the land of the Uttara Kuru to the north of Mt. Meru.

Thus the *Magas* or *Mangas* (as spelt in the *Mahâbhârata*) were known to the Indians as the priests of the *Śakas* (and not as the priests of the Zoroastrians, a rank which they got later). They migrated to India, most probably with the Śakas who established themselves in India. Colonies of the Magi might have migrated from the land of the Medes also, for the *Bṛhat Samhitâ* XIV mentions (a colony of) *Medas* (Medes) also in India.

The *Śâka-dvîpîya Maga Brâhmaṇas* (also called the *Âchârya Brâhmaṇas* or *Graha Vipras* of Bengal; the *Sevakas* of Râjaputana and *Śâkadvîpis* in Bihar and U.P.) are (like the Magi) astrologers, astronomers and physicians. They have naturalised themselves in India adopting Indian manners and customs. But still they have retained their old name.

The description 'sons of the Brâhmaṇs that is Canarese Brâhmaṇs, whose forefathers married women of the country' would suggest to the reader of the (Sanskrit drama) *Mṛchchhakaṭika* that the epithet "*Kâṇeḷîmâtaḥ*" (used in the sense of 'base-born' and addressed to the *Śakâra*), clearly indicates that the word is to be taken in the sense of one whose mother is *Kâṇeḷî*, i.e. a Canarese woman. *Kâṇeḷî* (a Canarese woman) thus came to be used in a bad sense, because *Kâṇeḷîmâtaḥ* refers to 'one of mixed blood.'

Similarly the other Dravidian ethnic names—*Chola* and *Chera* also—came to be used in bad senses. Prof. D. R. Bhandarkar has suggested in his Carmichael Lectures (1918) that the Sanskrit word *Chora* (thief) is identical with *Choḷa* used in a bad sense. The word *Chera* (=Kerala) seems, in my opinion, to have been introduced into Sanskrit as *Cheṭa* (Pkr. *Cheḍa*) meaning 'servant.' *Cheṭa* is, evidently, not an Aryan word, not being found in any other family of the Indo-European speech. Nor has it any good derivation in Skr. [Uhlenbeck suggests its derivation, (through Pkr.) from Skr. ✓ cheṣṭ (to attempt).] Then the history of the word *Cheṭa* will be just analogous to that of "slave"—originally a *Slav* made captive by the Teutons.

P. 173. **Gangaridai.**—The Sanskrit synonym was either *Gânga-râshṭra* 'dominion of the (lower) Ganges,' or Gangâ-*Râḍha*—the territory of the Ganges with Râḍha (which is identical with *Suhma*). But these combinations were not in actual use in Indian Literature.

As for **Vardhana** identified with **Parthalis**, it was *Paunḍra-Vardhana*, the E. boundary of the 'Middle Country,' (J.R.A.S., 1904, p. 86) and mentioned repeatedly in Pâla and Sena inscriptions. (E.I., IV, 24; I.A., XII, 251, etc.) It is Pandua (25° 8′ N., 88° 10′ E.) in the district of Maldah.

The Skr. form of Burdwan is वर्धमान which occurs in the *Kûrma-vibhâga* of the *Bṛhat Samhitâ* (XIV).

INLAND PARTS OF THE TERRITORIES ALONG THE WESTERN COAST.

P. 176. **Omenogara.**—The name sounds very much like Minagar or the city of the Mins or Śakas. (See notes on pp. 152, 156.) It was situated at the head of the Nanaguna (which seems to refer to the names of two passes—the 'Nana' Pass and the 'Guna' Pass). It thus corresponds to the modern Junnar (19° 12′ N., 73° 56′ E.); in Poona district—*Jîrṇa-nagara* (जीर्णनगर) or Old City—where there are some 150 caves (I.A., VI, p. 32) and as many as thirty inscriptions. It was, according to Sir R. G. Bhandarkar, the capital of *Nahapâna* [E.H.D., p. 33] and, as such, might be rightly named as the city of the Min. [I.A., 1926, pp. 144-5.] Not far from Junnar there is a river known as the Mina, and the valley watered by the river is still known as Minner. [Ibid.]

P. 177. **Tagara.**—It has been mentioned in the records of the *Śilâhâra* princes as their originals eat. (E.I., III, p. 269, etc.) The *Periplus* mentions it as a very great city, about ten days' journey to the east of Paiṭhâna. Dr. Fleet has shown that it is the modern 'Ter' or 'Thair' on a small river, the Thairna. It (18° 19′ N.

76° 12′ E.) is in the Naldrug district of the Nizam's Dominions, and about 95 miles, S.S.E. of Paithana. Here is a very ancient Buddhist *Chaitya*, built of brick, now used as a *Vaishṇava* temple. [J.R.-A.S., 1901, p. 537 ; 1902, p. 230 ; A.S.R., 1902–3, p. 205.] Skr. *Tagara*=Pkr. *Tuara* (=Tar or Ter).

P. 178. **Hippokoura.**—Kolhapur and Nasik are the two places with which it has been proposed to be identified. *Viḷivâyakura* was the Andhra king Gotamîputra (V. Smith, E.H.I., p. 232) or his viceroy (Bhandarkar).

P. 179. **Banaouasei.**—It is *Vanavâsî* (14° 32′ N., 75° 1′ E.) on the *Varadâ* (Wurda) river, in Sirsi Taluk, North Kânârâ district. It was the capital of a district of the same name mentioned in the *Mahâbhârata*, the *Purâṇas*, the *Bṛhat Samhitâ*, the Sûtras of *Vâtsyâyana*, *Daśakumâracharita*, etc. The *Mahâvanśa* mentions it as a place where Aśoka sent his missionaries. It was one of the capitals of the *Kadambas* (कदम्ब; 300–1200 A.D.) whose territory comprised the N.W. parts of Mysore and portions of N. Kânârâ. It was also called *Vaijayantî* (Buzantion). [As for the city visited by Hiuen Tsiang, read C.A.G., p. 745.]

P. 180. **Mousopallê**, the metropolis of the Pirates. It is evidently the city of the *Muṣikas* or *Muṣakas* mentioned in the *Mahâbhârata* (Bhîṣma, IX, 366, 371, etc.)

and the *Purâṇas* (Mar. LVII, 46, etc.) Ptolemy's account makes me sure that *Muṣaka* is the correct form of the word and that it means "Pirate" (from the root "muṣ," to rob). Thus we find a reference to piracy even in the very name of this tribe. [In the *Daśakumâra-charita* (Chap. VI) we find a graphic description of an attempt to loot the ship of a Greek (Yavana) captain named *Râmeṣu*, somewhere in the Bay of Bengal.] Its location is doubtful.

P. 181. **Pounnata.**—It is known in South Indian inscriptions as *Punnâḍa* (पुन्नाड़). It comprised the S.W. parts of Mysore. [Rice in his article on *Gangavâdi* in Bhandarkar Commemoration Volume.]

P. 184. **Paralia.**—Mentioned in the *Periplus* (§ 58). According to Caldwell, this is a translation of the Tamil *Karei*, "coast"; according to Burnell and Yule, it is *Purali*, an ancient local name for Travancore. The Râjâ of Travancore still styles himself *Puralîśan*, "Lord of Purali." Paralia, to the author of the Periplus, is the coast-line below the Travancore backwaters, around Cape Comorin, and as far as Adam's Bridge: comprised within the modern districts of Travancore and Tinnevelly. (Schoff, p. 234.)

P. 187. **Pityndra.**—It has been identified by M. Sylvain Levi with the city of *Pihuṁda* mentioned, in the *Uttarâdhyayana* Sûtra (XXI, 1–4) of the Jainas, as a place where

a merchant of *Champâ* (the capital of Anga) went. M. Levi has also pointed out that it has been mentioned in the Hâthigumphâ Inscription of Khâravela as *Pithuḍa*, a place which was ploughed down with a plough drawn by asses. Now Ptolemy describes Pityndra as the metropolis of the *Maisoloi* who take the name from the River *Maisolos* which signifies the whole extent of the mouths of the *Godâvarî* and the *Krishṇâ*. Herein is the river *Nagavali* also called *Langulia* [*Lângalî* or *Lângulinî* of the *Purâṇas*—Mar. LVII, 29, etc.] on which Chicacole stands. The very name of the river is to be connected with *Lângala* (=plough) and it seems to perpetuate the memory of the unusual punishment of Khâravela.

We cannot expect to find Pityndra, for it was destroyed by Khâravela a few centuries before Ptolemy who seems to have mentioned it on the authority of his old materials. [I.A., 1926, pp. 145-46.]

The original name of the city seems to be *Pṛthûda*(*ka*) [पृथूद(क)] "Much Watered," which is also the name of a famous place (mod. Pehoa) near Thaneswar. [C.A.G., pp. 385, 702.] *Pihu*[*ṁ*]*da* of the Jaina Sûtra and *Pithuda* may be easily derived from it. As for Ptolemy's spelling (Pityndra), there is no difficulty in explaining the "extra R." (Read my notes on p. 165.)

(Pp. 187–89) ISLANDS.

P. 188. **Milizêgyris.**—It is the *Melizigara* of the *Periplus* (p. 43). It has been identified, by McCrindle, with the modern Jaigarh (17° 17′ N., 72° 13′ E.), formerly a port of some size, but now little more than a fishing-village. It is not impossible that it may be the modern Râjâpur (16° 34′ N., 73° 31′ E.) to which Arab boats still trade direct. (See Imp. Gaz. of Ind. XIII, 379; XXI, 66). This is the *Sigerus* of Pliny. The name seems to suggest *Malayagiri* (Schoff, p. 201). "Malai" is the Tamil for Hill.

Heptanesia.—These are the *Sesecrienae* of the *Periplus* and probably the modern Vengurla Rocks (15° 53′ N., 70° 27′ E.), a group of rocky islets some three miles in length and nine miles out from the modern town of Vengurla, which was a port of considerable importance during the Dutch occupation in the 17th century. [Imp. Gaz. of Ind. XXIV, 307; Schoff, p. 202.]

Lieuke.—The 'White Island' of the *Periplus* is the modern Pigeon Island (14° 1′ N., 74° 16′ E.).

P. 189. **India beyond the Ganges** means India to the N. and E. of the Ganges and Further India. As for Ptolemy's account of Further India and the Indian Archi-

pelago, it has been fully dealt with by Mr. Gerini in his *Researches on Ptolemy's Geography* (published by the Royal Asiatic Society, London) and as such I have not commented on it. I only draw the attention of the reader to the following facts which clearly indicate that Further India and the Indian Archipelago were colonized by the Indians in a very remote age. A fourth century A.D. Pillar Inscription of the Buddhist sea-captain Mahânâvika Buddhagupta of Raktamṛttikâ (mod. Râṅgâmâṭi in Murshidabad district, Bengal) has been discovered in the Wellesley district of the Malay Peninsula. [Kern's Verspreide Geschriften, III (1915), p. 255.] A series of inscriptions proves clearly that there ruled, in Further India, from the second century A.D. up to the seventh century, at least, a line of Śaiva Hindu kings (Dharmamahârâjas) claiming descent from Aśvatthâman, son of Droṇa, and as such connected with the house of the Pallavas. [Bergaigne's Insc. Sansk. du Campâ et Cambodge (1893). Bul. Ecole F.E.O. II, p. 185; III, 206-11; IV, p. 918; XI, p. 264; XII, No. 8, pp. 15-16; XV, No. 2, pp. 3–5; Barth's Insc. Skr. du Cambodge, etc.] Four Yûpa inscriptions of King Mûlavarman, in the fourth or fifth century A.D. Pallava characters, discovered in 1879-80 at Kœtei in East Borneo, show the existence of a powerful Hindu Royal

Dynasty at that place.* These are the epigraphic proofs. As for sculptures of Indian deities in Further India and extensive Buddhist ruins in Java, they are too well-known to call for any remark.

P. 212. **Maroundai.**—These cannot be connected, as Dr. McCrindle has clearly noted, with the *Lampâka-Muruṇḍas* of Lamghan; for we find them in the north-west even during the reign of Samudragupta, as his Allahabad Pillar Inscription shows. The word cannot be equated with "*Mundas*" as Dr. McCrindle has done; for the loss of the second syllable cannot be explained.

I propose to connect *Maroundai* with the *Maladas*, *Mâladas* or *Mânadas* of the Epics and *Purâṇas*. [*Mahâbhârata*, *Sabhâ*, XXIX, 1081-2; *Droṇa*, VII, 183; *Vâyu*, XLV, 122; *Mar.* LVII, 43, etc.] They are mentioned in the *Râmâyaṇa* also (though in some editions the word is spelt as *Malajas*) as occupying the Shahabad district originally, but then dislodged from that place by the Demoness Tâḍakâ. They seem to have migrated eastward and settled in the district of Maldah in Bengal. The spelling of Pliny (Monedes) is almost identical with *Mânada*. The *Molindai* of Megasthenes and *Maroundai* of our author are to be

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* Dr. Vogel in *Overdruk int de Bijdragen tot de Toalen Volkenkande van Nederlandsch-Indië*, Deel 74, Aflevering 1-2, 1918.

connected with *Malada*. The insertion of the nasal in the last syllable is an example of the Prakrit tendency of वक्रादित्वात् नुम्. As for *R* for *L* in the second syllable, it is due to the "rhotacism" of certain Sanskritic dialects (e.g. Rigvedic and Maithil).

Kondôta.—It seems to be connected with the *Gandakî* on which it is to be located.

P. 217. **Takoraioi.**—Is it this tribe which has been mentioned in a second or third century B.C. Brâhmî inscription discovered at Basârh (25° 58′ N., 85° 11′ E.)—the site of *Vaiśâlî*—which runs thus: "*Vesâli anusaṁyânaka Ṭakâre*"? [For the inscription, read A.R.A.S.I., 1911-12, part I, pp. 18-19; 1913-14, p. 98 *ff*.]

Passalai.—This "Passalai" stands for *Vaiśâlî* (C.A.G., pp. 717-1) whereas the other "Passalai" stands for *Prastala*.

P. 219. **Kirrhadia.**—It is the land of the *Kirâtas*.

P. 222. **Indaprathai.**—These were the inhabitants of the *Prastha* or plain level country of the *Indra-dvîpa* which is identical (as I have shown in my article on the Purânic Nine Divisions of Greater India printed as an appendix to my edition of C.A.G.) with Burmah.

P. 223. **Nangalogai.**—The Sanskrit word for *naked* is *Nagna* and not *Nanga*.

P. 228. The **Kâśis** first appear in the *Paippalâda* recension of the *Atharvaveda*. In the *Brâhmaṇas* we hear of the city of *Kâśi* on the *Varaṇâvatî* river which is evidently

identical with the modern Varuṇâ. Though Kâśi is the older name, it is not correct that *Vârâṇasî* (and not *Vâranâsî* as has been wrongly spelt) was never used as a name for Benares.

P. 230. **Tôsalei.**—It is the city of *Tosalî* mentioned in the inscriptions of Aśoka and to be identified with the ruins of a city near Dhauli (in Orissa) where the edicts of Aśoka have been discovered. *Tosali* or *Tosala* has very often been mentioned with *Kośala* (e.g. Kâvyamîmâṁsâ, p. 93) which is the Mahâ-Kosala or the southern *Kośala* comprising the whole of the upper valley of the *Mahânadî* and its tributaries, from the source of the *Narmadâ* on the N. to the source of the *Mahânadî* itself on the S. and from the valley of the Wengangâ (W.) to the Hasda and Jonk rivers (E.)

P. 231. **Trilingon.**—The word seems to be connected with Trilinga, the Sanskritized form of Telugu and indicates that there was a colony of the Telugus in this part of the country.

P. 251. **Taprobane.**—The Skr. form is *Tâmraparṇa* or *Tâmraparṇi* ('Copper-coloured leaf'), one of the Purânic nine divisions of Greater India. (C.A.G., pp. 749–754.) In *Kauṭilya's Arthaśâstra* (II, xi) it has been referred to as *Pâra-samudra* (an alternative form of which is, according to a sûtra of Pâṇini, *Pâre-samudra*) which means 'Of the other side of the Ocean.'

Now a confusion of *Pâre-samudra* and its synonym *Pâre-sindhu* produced the *Palae Simoundu* of the *Periplus* which means this island. In page 247 of our text we read 'which was called *formerly Simoundou*.' Here *formerly* is evidently a mistranslation of the first part (Palae) of *Palae-Simoundou*.

Salikê is from *Siṁhala*.

P. 256. **Malaia,** a designation of Adam's Peak. [It is from the Tamiḷ word "Malai" meaning 'hill.'] It is known in Sanskrit Literature as the *Rohaṇa* hill. (*Râjataraṅginî*, III, 72.)

(Pp. 260–329) CENTRAL ASIA.

P. 260. **Hyrkania.**—It is the Greek name of the country known as *Vehrkâna* in Avestan and *Varkâna* in Old Persian. (Sacred Books of the East, IV, p. 2.) The Avestan and Old Persian forms enable me to identify it with *Vokkâṇa* of Sanskrit Literature (e.g. Varâhamihira's *Bṛhat Saṁhitâ*, XIV, 20, locating it to the western division; *Kâvyamîmâṁsâ*, pp. 93-94, etc.).

Parthia.—The Parthians are known in Sanskrit Literature as *Pârthiva* (?) (Fleet's Gupta Inscriptions), *Pathrava* (Nâṭyaśâstra), *Pârada* and *Pahlava* (Manu).

P. 262. **Margianê.**—It is the Greek name of the modern district of Merv which was known as *Margu* in Old Persian. (Sacred Books

of the East, Vol. IV, p. 2). I propose to identify it with the country of the *Mârgaras* mentioned (in Bṛhat Saṁhitâ, XIV, 18) with the *Yavanas* (Greeks).

P. 268. **Tokharoi.**—They are the *Tushâras* (तुषार), *Tuḳhâras* or *Tukhâras* of Sanskrit Literature. (*Mahâbhârata*, Sabhâ, L, 1850; Vana, LI, 1991; Śânti, LXV, 2429, etc. *Râmâyaṇa*, Kishkindhyâ, XLIV, 15; *Vâyu* XLV, 118; *Mar*, LVII, 39, etc. The Râjatarangiṇî mentions them repeatedly.) The so-called specimens of the ancient Tokharian dialects have now been discovered and they are now considered by Philologists as the lineal descendant of the now lost Primitive Indo-European language (Ursprache); for they exhibit the peculiarities of both the Asiatic and the European branches of the primitive speech. The discovery of these dialects has thus given a rude shock to the theory of European origin of the Primitive Indo-Europeans whose cradle is now again being located in Central Asia. [As for the alternative spellings *Tushâra* and *Tukhâra*, it is due to the *Vâjasaneyin* peculiarity of pronouncing *sh* (ष) as *kh* (ख)—a peculiarity which is to be met with in North Bihar (Mithilâ) even now.]

P. 272. **Oxos.**—This is the Greek spelling for Oxus (the Latin form) which is referred to in Sanskrit Literature as *Vaṅkshu*(*s*), or *Chakshus*.

P. 274. **Balkh.**—I am not sure if the word has any connection with Sanskrit *Bâhlîka* though Lassen identified the two. References in Sanskrit Literature clearly indicate the *Bâhlîkas*, or rather the two tribes of them, as dwelling in the Punjab. One of these tribes was closely connected with the *Madras*, for Śalya, king of *Madra* (with its capital at modern Sialkot), is also called lord of the *Vâhlikas* (*Mahâbhârata*, Âdi, CXIII, 4425–40; LXVII, 2642) and his sister *Mâdrî* is called *Vâhlîkî* also (Âdi, CXXV, 4886). The other people of this name appear to have been closely connected with the *Daradas* (Dards of Dardistan) [Bhîṣma, CXVIII, 5484, etc.]. Thus one Bâhlîka was situated in the plains of the Panjab alongside the Madradeśa, i.e., between the rivers Chenab and Sutlej; and the other among the lower slopes of the Himâlayas, very possibly between the Chenab and Bias. One of them seems to have migrated southwards near the mouth of the Indus; for the Meherauli Iron Pillar Inscription of Chandra (circa 400 A.D.) locates them there. But nowhere in Sanskrit Literature we find any indication which will enable one to identify Epic *Bâhlîka* (or *Vâhlîka*) with Balkh which comes from Avestan Bâkhdhi.

P. 274. **Sogdianoi.**—It is the Greek form of the district of Samarkand the Avestan name of which is Sughdha. (Sacred Books

of the East, Vol. IV, p. 2). The theoretical Sanskrit form from the Avestan is *Sugda* which seems to have been Sanskritized as the *Śûdra* mentioned in the *Bṛhat Saṁhitâ* (XIV, 18) together with the *Yavanas* (Greeks), *Mârgaras* (Margianê) and other nations of this locality.

P. 275. **Kômêdai.**—It is the *Gomeda* Mt. of the *Purâṇas* (e.g. Kûrma, XLVIII, 3) which is in the *Plaksha* (according to Kûrma) or *Gomedaka* (Matsya, CXXIII) Dvîpa.

P 281. **Tribes of Soǵdiana.**—Indian names in this list is to be accounted for by the migration of Indian tribes. But the *Takhoroi* were certainly the *Tukhâras* or *Tushâras* mentioned before (p. 393).

P. 283. **The Sakai** were the *Śakas* of Sanskrit Literature. Their land was known as the *Śâkadvîpa* which has been described as divided into seven provinces one of which is *Kaumâra* (Matsya, CXXII, 22) which is certainly identical with the land of the *Komaroi* of Ptolemy. The priests of their land were the *Magas* or *Mangas* and the warriors were the *Maśakas* (Mahâbhârata, Bhîṣma, chap. XI, 36-37 of Krishnâchârya's edition). As for the Magas, they have been noticed already (p. 381). The *Maśakas* were evidently the *Massagetai* of Ptolemy.

P. 298 **Otto.·okorrhas.**—The name is certainly connected with the *Uttara-Kuru* (उत्तर कुरु) of Sanskrit Literature. Though the description of *Uttara-Kuru* (*Mahâbhârata*,

Bhîṣma-Parvan) would make it rather an earthly Paradise, there is no reason to believe that it is a mythical land (as Dr. McCrindle thinks, p. 305).

P. 304. **The Aspakarai.**—Are they connected with the *Aspasiai* of Alexander's historians? The Aspasiai are the *Aśvakas*, through the Iranian form of *Aspa* ('horse'). [C.A.G., p. 667.]

The Bautta of the Râjataraṅgiṇî.—The correct spelling of the word is *Bhauṭṭa* (भौट्ट) which means peoples of Tibetan descent.

P. 308. **Ariana.**—It seems to have been named in the *Râjataraṅgiṇî* as *Âryâṇaka-deśa*.

P. 311. The **Koa.**—The Vedic *Kubhâ*; the modern Kabul river.

P. 314. **Drangianê.**—Its inhabitants were called, remarks Dr. McCrindle, Drangai or *Zarangae*. The second name enables me to identify them with the *Jṛngas* (ज्रङ्गाः of the *Bṛhat Saṁhitâ*, XIV, 21) mentioned with the *Śakas* [of Seistân].

P. 318. **By Massagetae Stephanos meant the Sakai.**—I have already pointed out that the *Massagetae* were the *Maśakas* described in Sanskrit Literature as the warrior tribe of the *Śakas*.

P. 321. **Port of Alexander.**—It is the Barbaricum or Alexander's Haven.

P. 322. **Rhamnai.**—These are the *Ramaṇas*, *Ramaṭhas* or *Râmaṭhas* of the Epics and Purâṇas. (*Mahâbhârata*, Bhîṣma, IX, 374; *Vâyu* XLV, 117; *Matsya* CXIII, 42, etc.)

Gynaikôn Limen or Women's Haven.—While describing the eastern part of Makran, Hiuen Tsiang mentions a city, the Chinese name of which has been Sanskritized by Watters (Vol. II, pp. 257-58) as *Strîśvara* or "Women Paramount." Thus Ptolemy has been supported by Hiuen Tsiang. [A district known as *Strîrâjya* outside India proper has been mentioned in the *Vâtsyâyana-Kâma-Sûtra* (p. 144 of Durgâprasâda's Ed.) and in the *Râjataraṅgiṇî*.]

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